

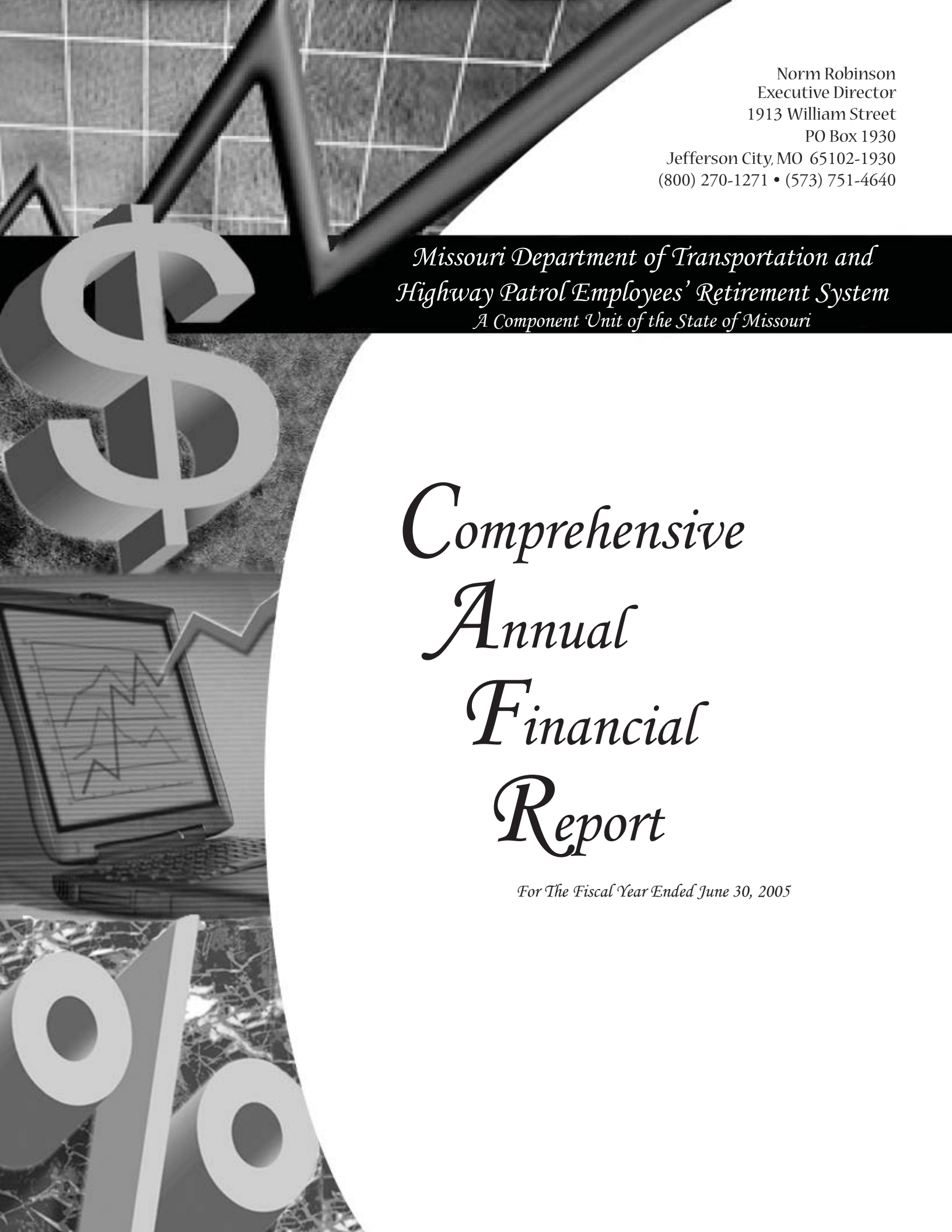
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*Missouri Department of Transportation and  
Highway Patrol Employees' Retirement System  
A Component Unit of the State of Missouri*

*Comprehensive  
Annual  
Financial  
Report*

*For The Fiscal Year Ended June 30, 2005*





Norm Robinson  
Executive Director  
1913 William Street  
PO Box 1930  
Jefferson City, MO 65102-1930  
(800) 270-1271 • (573) 751-4640

*Missouri Department of Transportation and  
Highway Patrol Employees' Retirement System  
A Component Unit of the State of Missouri*

# *Comprehensive Annual Financial Report*

*For The Fiscal Year Ended June 30, 2005*

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# *MoDOT & Patrol Employees' Retirement System*



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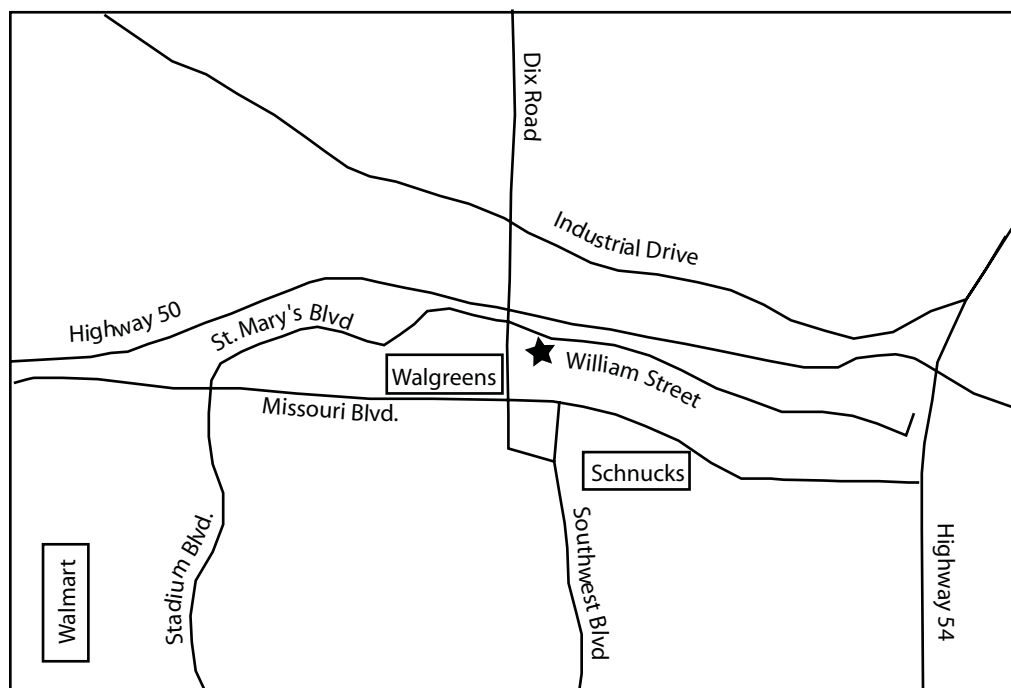
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# *Introductory Section*

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# Letter of Transmittal

Norm Robinson  
Executive Director



Susie Dahl  
Assistant Executive Director

December 1, 2005

To the Board of Trustees and System Members:

It is again with great pleasure that I submit this year's annual report of the MoDOT and Patrol Employees' Retirement System (MPERS).

## **Fiscal Year 2005 Highlights and Major Initiatives**

A significant highlight in this fiscal year was the planning and implementation of a Strategic Plan. MPERS is committed to member satisfaction and quality service delivery and is dedicated to serving members and their beneficiaries, the Board of Trustees and other interested parties. We have demonstrated a history of implementing beneficial improvements and continue to seek methods to improve service delivery and return on investments.

MPERS has adopted a strategic planning and performance-monitoring model. The planning and success monitoring process will be an on-going loop with MPERS mission at its core. The loop starts with strategic planning and proceeds to setting performance goals, budgeting for implementing the plans, managing the operations, and measuring the performance of all the steps and their overall impact on the goals of the organization. By developing a continuous strategic planning-to-performance measurement process, we hope to generate operational data for use in managing resources more efficiently and effectively, which will assist in meeting the demands of the "baby boomer" segment of the population and other members and retirees of MPERS.

The following mission and vision statements define who we are and what we do as an organization. We are committed to advancing MPERS in a direction that ensures we are effective in delivering benefits yet prudent in the management of our resources.

**MPERS' mission is** "to provide a foundation for financial security to plan participants by delivering quality benefits and exceptional member service through professional plan administration and prudent management of assets, at a reasonable cost to the taxpayers of Missouri."

**Our vision is** "to be the best retirement system we can be by making strategic investment decisions and implementing technological tools that streamline our processes and enhance customer service."

This past fiscal year we also revised our investment strategies, with the Board instructing staff and Summit Strategies, the system's consultant, to perform an extensive asset/liability study. The study included an in-depth review of both traditional and alternative asset classes, with the goal of developing an investment portfolio that achieves the target return without subjecting the system to unnecessary risk. More detailed information on this initiative can be found in this report's Investment Section.

The system also hired its first in-house General Counsel to assist the Board and staff in the daily management and administration of our benefits. This change has dramatically helped our staff in the day-to-day business of the system.

## **Report Contents and Structure**

This Comprehensive Annual Financial Report of the MoDOT and Patrol Employees' Retirement System for the fiscal year ended June 30, 2005, has been prepared to enhance knowledge and understanding of the retirement system. The material has been prepared in a manner to be useful and informative to the members, to the management of the Missouri Department of Transportation (MoDOT) and Missouri State Highway Patrol (Highway Patrol), and to the elected officials of the state of Missouri.



# Letter of Transmittal

Management of the retirement system is responsible for the accuracy and completeness of the information in this report. To the best of our knowledge and belief, the information presented is accurate in all material respects and is reported in a manner designed to fairly present the financial position of the fund. The report is also designed to comply with the reporting requirements of Sections 104.480, 104.1006, and 105.661 of the Revised Statutes of Missouri (RSMo.) as amended. The report is divided into the following five sections:

- The **Introductory Section**, which contains general information regarding the operations of MPERS.
- The **Financial Section**, which contains an in-depth explanation of the financial position of the plan, as well as the auditor's opinion of the system's financial records.
- The **Investment Section**, which outlines the value of the system's assets and the historical returns of the portfolio.
- The **Actuarial Section**, which includes the actuary's certification of the recommended contribution rates and presents the assumptions used to arrive at those rates.
- The **Statistical Section**, which provides a statistical profile of our active, terminated vested, and retired members.

## **Background Information**

MPERS was established by state statute in 1955. Under that legislation, employees of MoDOT and the Highway Patrol became members of the retirement system on September 1, 1955. Effective October 1, 1955, the system accepted 109 retirements. The system initially provided only regular retirement and disability benefits and required the employees to share in the cost of the plan.

The plan provisions have changed many times over the years. Today, at no cost to the employees, the system offers not only enhanced retirement and disability benefits, but also benefits for survivors of active and retired members, benefits for qualified terminated vested members, and death benefits.

A ten-member Board of Trustees is responsible for oversight of the system. MPERS became a separate legal entity and instrumentality of the state in 1988, and as such, is not subject to the state's legislative budget process, although the system's administrative spending is governed by a Board-approved "internal" budget. The system's financial information is included in the state's Comprehensive Annual Financial Report as a component unit.

MPERS is financed by employer contributions and investment earnings. All funding from MoDOT and approximately 85% of funding from the Highway Patrol are from the State Highway and Transportation Fund. Although Missouri, like most of the country, is facing budget constraints, these employers have never failed to provide the required contributions.

## **Financial Information**

This report has been prepared in accordance with generally accepted accounting principles for governmental accounting and reporting. The independent firm of Evers & Company, CPAs, has issued an unqualified opinion (meaning no audit findings) on MPERS financial statements. Internal controls have been established by management to provide reasonable assurance that the financial statements are free of any material misstatements.

As reported in the Financial Section, the system's net assets improved by \$876 million during the fiscal year. The Management's Discussion and Analysis, beginning on page 19 assesses the financial position of the system, and provides an overview of the year's financial activities.

## **Investments**

The state statutes allow the system to make investments using the same care, skill, and diligence that a prudent person acting in a similar capacity would use. In keeping with this prudent person rule, the Board of Trustees has established investment policies. The system's investment managers are allowed full discretion in investment decisions within the confines of those guidelines and the statutory investment authority.

# *Letter of Transmittal*

Our investment portfolio experienced an 11.4% rate of return for the 2005 fiscal year. Over the last five fiscal years, our balanced fund earned a rate of 3.8%. The Investment Section of this report contains detailed information regarding the year's events.

## **Funding**

Based in part by the improved investment results, the system's funded status improved slightly in fiscal year 2005 from 53.5% to 53.9%. The Board continues to closely monitor the system's funded status, and is evaluating a number of options that could potentially inject additional funds into the system. Historical information on funding progress can be found on page 40.

## **Legislation**

The most significant legislative event during the 2005 legislative session was the introduction of HB 333. This bill would have consolidated MPERS with MOSERS, the retirement system for all other state employees. While opposing the wording of HB 333, the Board has taken the position that MPERS is open to discussion of streamlining efficiencies and effectiveness through consolidation.

On August 28, 2005, Governor Matt Blunt established a State Retirement Consolidation Commission per Executive Order 05-22. The commission's task will be to analyze the issues and objectives of the boards responsible for administering benefits, the effect on funding and contribution rates, the effect on investments, and the similarities and differences in retirement plan provisions along with the impact on benefit services and membership. Further, the commission is charged with ensuring the current benefit structure provides financial security in an equitable and cost-effective manner.

No legislative changes were passed into law during this session.

## **Report Conclusion and Distribution**

This report is a product of the combined efforts of the MPERS staff and advisors functioning under the Board's leadership. It is intended to provide complete and reliable information, which will facilitate the management decision process; serve as a means for determining compliance with legal requirements; and allow for the evaluation of responsible stewardship of the funds of the system.

Copies of this report are provided to the Governor, the State Auditor, and the Joint Committee on Public Employee Retirement. It is also being distributed to all MoDOT division and district offices and Highway Patrol general headquarters and troop headquarters. These offices form the link between MPERS and its members, and their cooperation contributes significantly to the success of MPERS. We hope all recipients of this report find it informative and useful. Additional copies will be furnished upon request. Copies are also available at the web site of MoDOT ([www.modot.mo.gov](http://www.modot.mo.gov)).

## **Acknowledgments**

The system received the Public Pension Coordinating Council's Public Pension Standards 2004 award for plan design and administration. In order to receive this award, a system must meet expectations in the areas of comprehensive benefits, funding, actuarial valuations, audit, investments, and communications.

I commend the MPERS staff efforts on creating another outstanding report. In addition, I take this opportunity to express my gratitude to the staff, advisors, and the many other people and organizations who have worked so diligently to assure the successful operation of the system.

Respectfully submitted,



Norm Robinson  
Executive Director



Public Pension Coordinating Council  
Public Pension Standards  
2004 Award

Presented to

Missouri Department of Transportation and Highway Patrol  
Employees Retirement System

In recognition of meeting professional standards for  
plan design and administration as  
set forth in the Public Pension Standards.

*Presented by the Public Pension Coordinating Council, a confederation of*

National Association of State Retirement Administrators (NASRA)  
National Conference on Public Employee Retirement Systems (NCPERS)  
National Council on Teacher Retirement (NCTR)

Alan H. Winkle  
Program Administrator



**Lieutenant Juan Villanueva**  
**Highway Patrol Employees' Representative**  
 Elected by Patrol Employees  
*Term Expires 7-1-2006*



**James B. Anderson**  
**Board Chairman**  
**Highways & Transportation**  
**Commissioner**  
*Term Expires 3-1-2009*



**Colonel Roger Stottlemyre**  
**Board Vice-Chairman & Superintendent**  
**of the Missouri State Highway Patrol**  
*Ex-Officio Member*



**Bill Shaw**  
**Retiree Representative**  
 Elected by Retired Members of MPERS  
*Term expires 7-1-2006*



**Senator John Griesheimer**  
**State Senator**  
 District 26  
 Appointed by President Pro-Tem of the Senate

## *Board of Trustees*



**Representative**  
**Charlie Schlottach**  
**State Representative**  
 District III  
 Appointed by the Speaker of the House

MPERS is governed by a Board of Trustees.  
 As set out in Section 104.160 of the Revised  
 Statutes of Missouri, the Board is comprised  
 of ten members:



**Bill McKenna**  
**Commission Member**  
 Highways & Transportation Commissioner  
*Term Expires 3-1-2007*



**Harold Reeder**  
**MoDOT Employees' Representative**  
 Elected by MoDOT Employees  
*Term Expires 7-1-2006*



**Pete Rahn**  
**Director of the Missouri**  
**Department of Transportation**  
*Ex-Officio Member*



**Duane Michie**  
**Commission Member**  
 Highways & Transportation Commissioner  
*Term Expires 3-1-2009*

# Board Chairman's Letter



## Board of Trustees

James B. Anderson, <i>Chairman</i>	Pete Rahn, <i>Member</i>
Colonel Roger Stottlemire, <i>Vice Chairman</i>	Lieutenant Juan Villanueva, <i>Member</i>
Duane Michie, <i>Member</i>	Harold Reeder, <i>Member</i>
Bill McKenna, <i>Member</i>	Bill Shaw, <i>Member</i>
Representative Charlie Schlottach, <i>Member</i>	Norm Robinson, <i>Executive Director</i>
Senator John Griesheimer, <i>Member</i>	Dan Pritchard, <i>General Counsel</i>

October 1, 2005

To the members of the MoDOT & Patrol Employees' Retirement System:

On behalf of the Board of Trustees, we are pleased to present the Comprehensive Annual Financial Report of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) for the fiscal year ended June 30, 2005. This report provides information on the financial status of your retirement system, while also highlighting significant changes that occurred during the year.

During the past year, the Board's membership experienced some change due to the departure of Representative Larry Crawford who served on our board for 2 years, and Senator Stephen Stoll who served for 6 years. We added Representative Charlie Schlottach and Senator John Griesheimer as their replacements. In addition, MoDOT Acting Director Dave Snider left our board when Pete Rahn was named as the new Director for MoDOT. All those who left the Board exemplified what fiduciary responsibility means in their every action. Their concern for the membership served as a model for other board members, and we recognize them for the valuable contributions they made while serving as trustees. Although we will miss working with Larry, Stephen and Dave, we welcome the opportunity to work with Charlie, John and Pete.

This past year we also welcomed Dan Pritchard as the system's first in-house General Counsel to assist the Board in the management and oversight of the system's legal issues. Dan was previously employed by MoDOT in the Chief Counsel's office and was assigned to retirement system issues.

One of the accomplishments we are most proud of is our strategic planning initiative for MPERS. We are excited to have implemented a strategic plan that creates a guide that our organization can use as a road map for the future.

Our retirement system continues to grow in asset value as well as in the number of active members and benefit recipients. At the end of the fiscal year, our asset value was \$1.44 billion with 17,371 members.

You are encouraged to carefully review this report, as it contains a wealth of information about your retirement system. If you have questions or comments, please feel free to contact us. We can be reached at P. O. Box 1930, Jefferson City, Missouri 65102. Our telephone number is 573-751-4640 (or toll-free 1-800-270-1271).

I am proud of MPERS and would like to take this opportunity to thank the members, retirees, advisors, and staff who assist the Board in the operation of our retirement system. On behalf of the Board of Trustees, we will continue to prudently manage the system so as to provide for a secure retirement future for each of our members.

In closing, it is our hope that this letter provides you with a brief perspective on MPERS accomplishments and their commitment to continually improve our administrative operations.

Sincerely,

James B. Anderson  
Chairman



# *Retirement System Staff*

Our Mission is to provide a foundation for financial security to plan participants by delivering quality benefits and exceptional member service through professional plan administration and prudent management of assets, at a reasonable cost to the taxpayers of Missouri.



**Bottom Row:** Angel Backes, Lois Wankum & Mary Jordan

**Middle Row:** Larry Krummen, Susie Dahl, Norm Robinson & Dan Pritchard

**Top Row:** Jennifer Schmitz, Ginger Miller, Marvin Klebba, Mariel Hale & Bev Wilson

# *Administrative Organization*

## **Director's Office**

The Director's Office provides administrative support in the major legislative, operational, and oversight functions of the retirement, benefit, and investment programs.

## **Financial Services**

Financial Services is responsible for maintaining all the financial records and reports of MPERS. The accountant, who is an employee of MoDOT, interacts with the investment custodian, the Office of Administration, MoDOT's and the Highway Patrol's payroll/personnel departments, the actuary, auditors, the depository bank, Missouri's Department of Revenue, and the Internal Revenue Service. In addition, the accounting employee assists the chief investment officer in tracking and predicting target cash balances, assists MPERS in annual budget development and monthly budget-to-actual reporting, and calculates monthly premium payments to the long-term disability insurer. Accounting also processes MPERS semi-monthly office payrolls, and reconciles monthly benefit payments and contributions/payrolls posted. The retirement system reimburses MoDOT for financial services.

## **Benefit Services**

Benefit Services is responsible for all contact with the membership regarding the benefit programs administered by MPERS, which include retirement; and long-term disability. The benefit staff is responsible for preparing and delivering the pre-retirement and retirement basics seminars in addition to assisting with the development of member communication material.

## **Member Payroll**

The Member Payroll Section is responsible for establishing and maintaining all membership records including maintenance of the data on the mainframe "retirement master", and verifying retirement calculations; balancing payroll deductions for insurance, taxes, and credit unions; interacting with SAM II; and entering the payroll, service and leave data into the system's computerized database.

## **Legal Services**

Legal Services is responsible for coordinating and handling the legal work and quasi-judicial work arising from the administration of the laws governing the general operation of the system.

## **Investments**

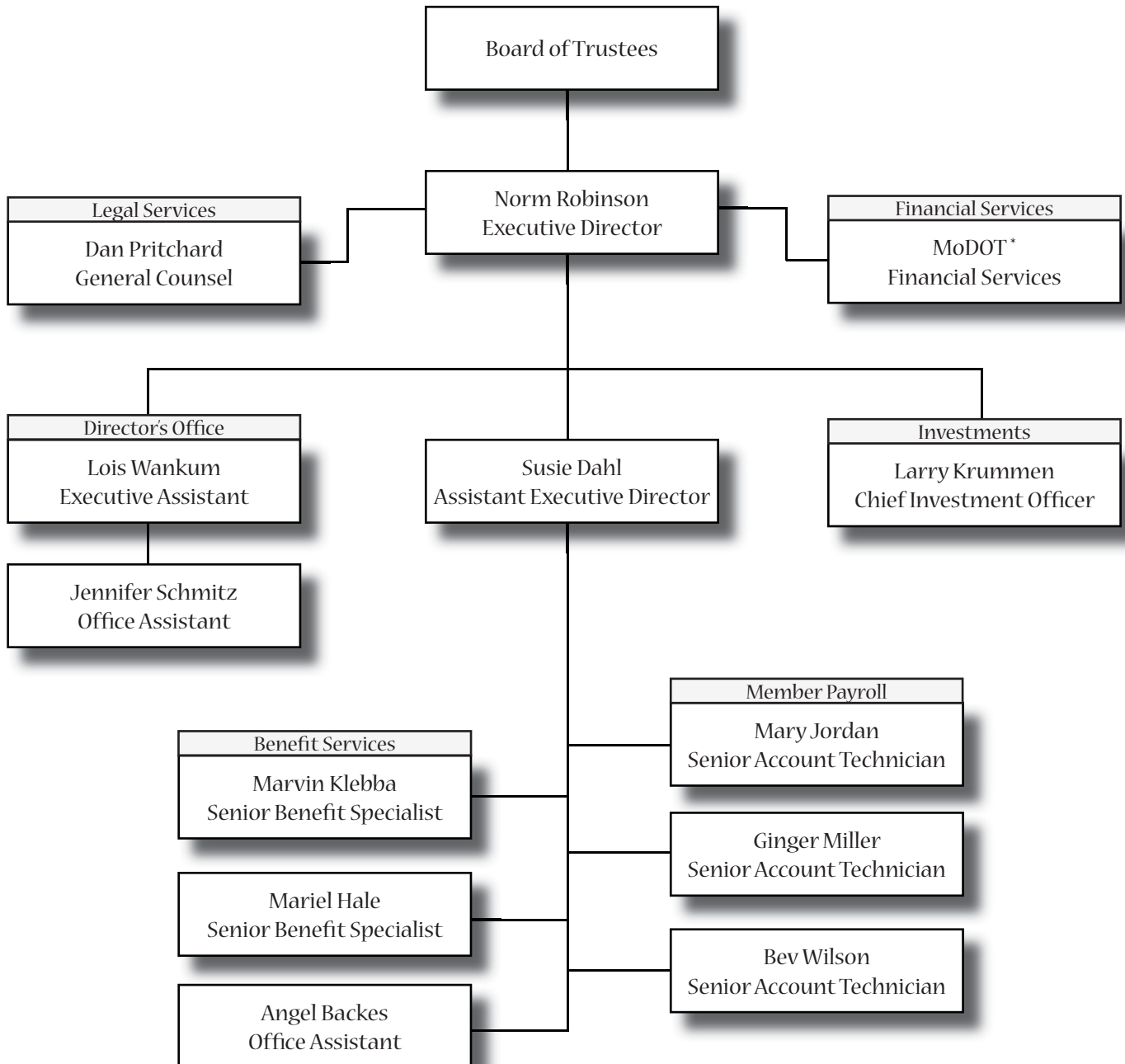
The Investment Section works closely with the general investment consultant to oversee the investment portfolio and provide consulting services to the board and the executive director. This includes, but is not limited to: a) formulating investment policy and asset recommendations; b) providing recommendations on the selection, monitoring and evaluation of external investment advisors; c) measuring and reporting on investment performance; d) conducting market research on political, financial, and economic developments that may affect the system; and e) serving as a liaison to the investment community.



# Administrative Organization

The Executive Director of MPERS has charge of the offices and records of the system and hires such employees deemed necessary, subject to the approval of the Board of Trustees. The system employs twelve full-time staff.

Benefit-related duties that are performed by MoDOT and Highway Patrol personnel are considered duties in connection with their regular employment.



\*The Retirement System reimburses the department for time spent by this individual in performing accounting duties.

# Professional Services

The following firms were retained at year-end by the Board of Trustees to serve in professional capacities or provide consultant services. Please refer to pages 54 and 55 in the Investment Section for the Schedules of Investment Expenses and Brokerage Commissions for the investment professionals.

<b>Actuary</b>
Gabriel, Roeder, Smith & Company Southfield, Michigan
<b>Auditor</b>
Evers & Company, CPAs Jefferson City, Missouri
<b>Business Consultant</b>
Maximus Waltham, Massachusetts
<b>Investment Consultant</b>
Summit Strategies Group St. Louis, Missouri
<b>Legislative Consultant</b>
Jack Pierce Jefferson City, Missouri
<b>Master Trustee/Custodian</b>
The Northern Trust Company Chicago, Illinois
<b>Risk Management/Insurance Consultant</b>
The Standard Insurance Company Portland, Oregon
Charlesworth Benefits Overland Park, Kansas
<b>Investment Managers</b>
Acadian Asset Management Boston, Massachusetts
AEW Partners Boston, Massachusetts
AQR Capital Management Greenwich, Connecticut
Artisan Partners Milwaukee, Wisconsin

<b>Investment Managers (continued)</b>
Barclays Global Investors San Francisco, California
BlackRock, Inc. New York, New York
Bridgewater Associates Westport, Connecticut
Deutsche Asset Management New York, New York
Enhanced Investment Technologies (INTECH) Palm Beach Gardens, Florida
GMO Boston, Massachusetts
ING Clarion New York, New York
Julius Baer Investment Management New York, New York
Och-Ziff Real Estate New York, New York
Principal Global Investors Des Moines, Iowa
RMK Timberland Winston-Salem, North Carolina
Rothschild Asset Management New York, New York
Silchester International Investors Limited New York, New York
The Northern Trust Company Chicago, Illinois
Urdang Plymouth Meeting, Pennsylvania
Western Asset Management Company Pasadena, California

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# *Independent Auditors' Report*

## **Evers & Company, CPA's, L.L.C.**

Certified Public Accountants and Consultants

Elmer L. Evers  
Jerome L. Kauffman  
Richard E. Elliott  
Dale A. Siebeneck  
Keith L. Taylor  
Lynn J. Graves  
Jo L. Moore

To the Board of Trustees of the  
Missouri Department of Transportation and  
Highway Patrol Employees' Retirement System  
Jefferson City, Missouri

We have audited the accompanying statements of plan net assets of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (the Retirement System), a pension trust fund of the State of Missouri, as of June 30, 2005 and 2004, and the related statements of changes in plan net assets for the years then ended. These financial statements are the responsibility of the Retirement System's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net assets of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System as of June 30, 2005 and 2004, and the changes in plan net assets for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The Management's Discussion and Analysis (MD&A) on pages 19 through 23 is not a required part of the basic financial statements but is supplementary information required by the Governmental Accounting Standards Board. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the supplementary information. However, we did not audit the information and express no opinion on it.

Our audit was made for the purpose of forming an opinion on the financial statements taken as a whole. The supplementary schedules of funding progress and employer contributions on pages 40 through 41 are not a required part of the basic financial statements of the System, but are required by the Governmental Accounting Standards Board (GASB). The supplementary information included on pages 42 through 44 is presented for purposes of additional analysis and is not a required part of the basic financial statements of the Retirement System. Such information, included on pages 40 through 44, have been subjected to the auditing procedures applied in the audit of the financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

*Evers & Company, CPA's, L.L.C.*

EVERS & COMPANY, CPAs, L.L.C.  
Jefferson City, Missouri  
September 14, 2005

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# *Management's Discussion and Analysis*

The management of the MoDOT and Patrol Employees' Retirement System (the System, or MPERS) provides this discussion and analysis of the System's financial performance during fiscal year 2005 (FY05). While this discussion is intended to summarize the financial status of the System, readers should consider this information in conjunction with the information that is furnished in the more detailed financial statements.

## **BASIC FINANCIAL STATEMENTS DESCRIPTIONS**

As required by the Governmental Accounting Standards Board (GASB) accounting standards, this financial report consists of Management's Discussion and Analysis (this section), the basic financial statements (including notes to the basic financial statements), and other required supplementary information.

**Financial Statements** report information about the System using accounting methods similar to those used by private-sector companies, by using the economic resources measurement focus and accrual basis of accounting. These statements provide both long-term and short-term information about the System's overall financial status. These statements follow this Management's Discussion and Analysis section:

- The Statement of Plan Net Assets includes all the System's assets and liabilities.
- The Statement of Changes in Plan Net Assets accounts for all the current year's additions (income) and deductions (expenses), regardless of when cash is received or paid.

**Notes to the Financial Statements** are included following the financial statements that interpret and explain some of the information in the financial statements and provide more detailed data. **Required Supplementary Information** follows the Notes and further support the information in the financial statements.

Following are summarized data from the financial statements. The section entitled "Assessment of Overall Financial Position and Results of Operations" provides explanation and analyses of the major reasons for changes in the condensed financial statements from FY04 to FY05.

# Management's Discussion and Analysis

## CONDENSED FINANCIAL STATEMENTS

The System's combined net assets were \$1.441 billion at the end of FY05, an increase of \$876 million over the beginning balance of \$1.353 billion.

The System's investments represent the main component (88%) of total assets. These include holdings of stock, government sponsored enterprises, bonds, mortgages, real estate, timber, and other fixed income investments.

The largest component within Accounts Payable is Securities Lending Collateral. This represents the amount owed for collateral to be returned as the result of securities lent, which is a direct offset to the corresponding asset.

<b>Summarized Statement of Plan Net Assets</b> <b>(in thousands of dollars)</b>			
	<b>6/30/2005</b>	<b>6/30/2004</b>	<b>Change</b>
Cash and receivables	\$ 191,135	\$ 173,571	10.12%
Investments	1,416,616	1,335,423	6.08%
Capital assets	691	708	-2.40%
Other assets	8	157	-94.90%
<b>Total assets</b>	<b>\$ 1,608,450</b>	<b>\$ 1,509,859</b>	<b>6.53%</b>
Accounts payable	167,381	156,404	7.02%
Long-term debt	14	18	-22.22%
<b>Total liabilities</b>	<b>\$ 167,395</b>	<b>\$ 156,422</b>	<b>7.01%</b>
<b>Total net assets</b>	<b><u>\$1,441,055</u></b>	<b><u>\$1,353,437</u></b>	<b><u>6.47%</u></b>



# Management's Discussion and Analysis

Net investment income, a primary component of plan additions, resulted in a gain of \$145 million. The section below further describes and analyzes the major changes between the fiscal years.

<b>Summarized Statement of Changes in Plan Net Assets (in thousands of dollars)</b>			
	<b>6/30/2005</b>	<b>6/30/2004</b>	<b>Change</b>
Contributions	\$ 102,605	\$ 87,568	17.17%
Net investment income	144,641	180,911	-20.05%
Other income	31	34	-8.82%
<b>Total additions</b>	<b>\$ 247,277</b>	<b>\$ 268,513</b>	<b>-7.91%</b>
Benefits	157,742	154,987	1.78%
Administrative expenses	1,917	1,639	16.96%
<b>Total deductions</b>	<b>\$ 159,659</b>	<b>\$ 156,626</b>	<b>1.94%</b>
<b>Change in net assets</b>	<b>\$ 87,618</b>	<b>\$ 111,887</b>	<b>-21.69%</b>
<b>Net assets-beginning</b>	<b>1,353,437</b>	<b>1,241,550</b>	<b>9.01%</b>
<b>Net assets-ending</b>	<b><u>\$1,441,055</u></b>	<b><u>\$1,353,437</u></b>	<b><u>6.47%</u></b>

## ASSESSMENT OF OVERALL FINANCIAL POSITION AND RESULTS OF OPERATIONS

Overall, the financial position of the System improved by \$87.6 million, reported as the "change in net assets."

The main component of the increase in Contributions to the System is in employer contributions. The contribution rate, based on an actuarial recommendation approved by the Board of Trustees, increased effective July 1, 2004. The rate applied to non-uniformed payroll (MoDOT, Civilian Patrol, and MPERS) increased from 25.54% to 28.28%. The rate applied to uniformed Patrol payroll increased from 38.40% to 43.54%. This increase was to improve the funded ratio of the System. In addition, as part of the State's budget process, all employees were granted a \$1,200 annual salary increase, which led to greater contributions in this year for the eventual higher benefits to be paid.

Net Investment Income totaled \$144.6 million in FY05, representing an 11.4% return for the period. While this return compares favorably to the System's assumed actuarial rate of return of 8.25%, the total income is down 20.05% relative to FY04, primarily due to the overall performance of the broad investment markets. The return of the System's policy benchmark (the return that would have been earned by investing passively across the broad investment markets) was 11.2% in FY05, a considerable decrease when compared to a 13.5% return in FY04. Annual returns within the broad investment markets are outside of the control of the System, and are expected to fluctuate from year to year. The Board of Trustees has approved a diversified asset allocation that, over time, is expected to realize the assumed actuarial rate of return of 8.25%.

# Management's Discussion and Analysis

Administrative Expenses increased mainly due to the following:

- The Board approved staff salary increases based on recommendations of an independent salary study. These increases also directly impacted the amount of employer taxes paid and the amount expensed for employer retirement contribution, which increased from 25.54% to 28.28% during the same period. In addition, employer costs for medical insurance increased.
- Additional monies were spent on professional services in FY05 to pay for a consultant to conduct a review focusing on ways to improve customer service, benefit delivery, and technology. In addition, the System contracted with an insurance company to provide case management services for disabilities approved prior to July 1, 2004.
- FY05 saw the first full year of expenses for the Chief Investment Officer hired mid-way through the previous fiscal year. Costs of purchasing software for the investment functions were also incurred. In addition, the contract for general investment consulting services was re-bid, resulting in increased on-going costs.

## CAPITAL ASSETS

At the end of FY05, the System had invested \$691 thousand in fixed assets, net of depreciation.

<b>Capital Assets Summary</b> <b>(in thousands)</b>				
	<b>06/30/04</b> <b><u>Balance</u></b>	<b><u>Additions</u></b>	<b><u>Deletions</u></b>	<b>06/30/05</b> <b><u>Balance</u></b>
Land and improvements (not depreciated)	\$ 84	\$ 0	\$ 0	\$ 84
Buildings and equipment	692	19	8	703
Depreciation	<u>(68)</u>	<u>(35)</u>	<u>(7)</u>	<u>(96)</u>
Total	\$ 708	\$ (16)	\$ 1	\$ 691

# *Management's Discussion and Analysis*

## **DEBT ADMINISTRATION**

At June 30, 2005, the System had \$14 thousand of outstanding long-term debt, consisting of payments due on a lease of a copier/printer. The cost of the copier was \$22 thousand and is included in office equipment in Capital Assets.

## **CURRENTLY KNOWN FACTS AND RECENT EVENTS**

The Board of Trustees approved an increase in the required state contribution, effective July 1, 2005. The rate applied to non-uniformed payroll (MoDOT, Civilian Patrol, and MPERS) will increase from 28.28% to 30.49%. The rate applied to uniformed Patrol payroll will increase from 43.54% to 44.27%. This increase is intended to improve the funded ratio of the System.

## **CONTACTING THE RETIREMENT SYSTEM'S MANAGEMENT**

This financial report is designed to provide a general overview of the System's finances. Questions about this report or requests for additional financial information should be sent to the MoDOT and Patrol Employees' Retirement System, P.O. Box 1930, Jefferson City, MO 65102-1930.

# Statements of Plan Net Assets

	2005	2004
<b>ASSETS:</b>		
Cash	\$ 1,503,493	\$ 624,311
Receivables		
Contributions	4,349,255	3,694,508
Accrued interest and income	3,021,777	4,328,994
Investment sales	23,613,763	14,794,017
Other	453,272	44,493
Total Receivables	31,438,067	22,862,012
Investments, at fair value (Notes 1 & 3)		
Stocks and Rights/Warrants	767,671,130	822,278,903
Government obligations	21,313,643	177,892,967
Corporate bonds	26,048,372	69,604,050
Timberland	27,913,195	41,063,671
Real estate	162,914,638	51,375,542
Mortgages and Asset-Backed Securities	54,494,644	133,559,600
Absolute Return	236,467,800	0
Tactical Fixed Income	104,082,785	0
Short term investments	15,709,943	39,648,326
Total Investments	1,416,616,150	1,335,423,059
Invested securities lending collateral	158,192,848	150,084,860
Prepaid expenses	8,025	156,723
Capital Assets		
Land	84,000	84,000
Building	581,619	581,619
Equipment	120,989	110,111
Accumulated depreciation	(95,831)	(67,526)
Net Capital Assets	690,777	708,204
<b>TOTAL ASSETS</b>	<b>\$ 1,608,449,360</b>	<b>\$ 1,509,859,169</b>
<b>LIABILITIES:</b>		
Capital lease	\$ 14,202	\$ 17,899
Accounts payable	1,911,766	1,237,939
Accrued BackDROP payments payable	44,865	89,730
Security lending collateral	158,192,848	150,084,860
Investment purchases	7,231,106	4,992,236
<b>TOTAL LIABILITIES</b>	<b>\$ 167,394,787</b>	<b>\$ 156,422,664</b>
<b>NET ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>	<b>\$ 1,441,054,573</b>	<b>\$ 1,353,436,505</b>

A schedule of funding progress is presented on page 40.  
(See accompanying Notes to the Financial Statements.)

# *Statements of Changes in Plan Net Assets*

	2005	2004
<b><u>ADDITIONS:</u></b>		
Contributions-employer	\$ 102,240,145	\$ 86,724,914
Contributions-other	<u>364,680</u>	<u>842,665</u>
Total Contributions	102,604,825	87,567,579
Investment Income - from investing activities		
Net appreciation and income	\$ 152,402,693	\$ 184,543,171
Less: investment expenses	<u>(8,268,303)</u>	<u>(3,965,631)</u>
Net Investment Income - from investing activities	144,134,390	180,577,540
Investment Income - from securities lending activities		
Security lending income	\$ 3,793,092	\$ 1,944,339
Less: investment expenses	<u>(3,286,414)</u>	<u>(1,610,972)</u>
Net Investment Income-from securities lending activities	506,678	333,367
Other Income	<u>\$ 31,104</u>	<u>\$ 33,851</u>
<b>Total Additions</b>	<b>\$ 247,276,997</b>	<b>\$ 268,512,337</b>
<b><u>DEDUCTIONS:</u></b>		
Benefits	\$ 157,742,337	\$ 154,987,027
Administrative expenses	<u>1,916,592</u>	<u>1,639,133</u>
<b>Total Deductions</b>	<b>\$ 159,658,929</b>	<b>\$ 156,626,160</b>
NET INCREASE (DECREASE)	\$ 87,618,068	\$ 111,886,177
<b>NET ASSETS HELD IN TRUST FOR PENSION BENEFITS</b>		
Beginning of Year	<u>1,353,436,505</u>	<u>1,241,550,328</u>
End of Year	<u><b>\$ 1,441,054,573</b></u>	<u><b>\$ 1,353,436,505</b></u>

(See accompanying Notes to the Financial Statements.)

# *Notes to the Financial Statements*

*For the Years Ended June 30, 2005 and 2004*

## **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:**

As established under Section 104.020, the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is a body corporate and an instrumentality of the State of Missouri. Due to the nature of MPERS reliance on funding from MoDOT and the Highway Patrol, and control of the overall plan document by the legislative and executive branches of state government, MPERS is considered a part of the State of Missouri financial reporting entity and is included in the state's financial reports as a component unit shown as a pension trust fund.

### **Note 1 (a) - Basis of Accounting**

The financial statements were prepared using the accrual basis of accounting. Contributions are recognized as revenues in the period in which employee services are performed. Benefits are recognized when due and payable and expenses are recorded when the corresponding obligations are incurred. Dividend income is recognized when dividends are declared. Interest income is recognized when earned.

### **Note 1 (b) - Method Used to Value Investments**

Investments are reported at fair value on a trade date basis. Bonds and stocks traded on a national or international exchange are valued at the reported sales price at current exchange rates. Mortgages are valued on the basis of future principal and interest payments, and are discounted at prevailing interest rates for similar instruments. The fair value of real estate investments is based on independent appraisals. Investments that do not have an established market are reported at estimated fair value. At the end of the fiscal year, investments with estimated fair values were limited to certain real estate partnerships that utilize a quarterly and/or annual appraisal process to estimate fair value.

### **Note 1 (c) - Capital Assets**

MPERS capitalizes assets with an expected useful life greater than one year with a cost of greater than \$1,000. Capital assets are depreciated on the straight-line method over the estimated useful lives of the related assets. The estimated useful lives are as follows:

Furniture and Equipment	5 – 10 years
Building and Improvements	30 years

### **Note 1 (d) - Use of Estimates**

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

### **Note 1 (e) – Cash**

Cash includes cash on hand, demand deposits, and short-term investments with original maturities of three months or less from the date of acquisition.

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **NOTE 2 – PLAN DESCRIPTION:**

MPERS is established under Section 104.020, is a body corporate and an instrumentality of the state as a multiple-employer, public employee retirement system with two primary benefit structures known as the Closed Plan and the Year 2000 Plan. These plans provide retirement, survivor, and disability benefits for employees of MoDOT, the Highway Patrol, and MPERS staff. These plans are administered in accordance with the requirements of a cost-sharing, multiple-employer, public-employee retirement plan and in accordance with the Revised Statutes of Missouri. In MPERS are vested the powers and duties specified in sections 104.010 to 104.312 and 104.601 to 104.805 and 104.1003 to 104.1093, RSMo., and such other powers as may be necessary or proper to enable it, its officers, employees, and agents to carry out fully and effectively all the purposes outlined pursuant to these sections. Responsibility for the operation and administration of the system is vested in the Board of Trustees. MPERS is not subject to the provisions of the Employee Retirement Income Security Act of 1974. Detailed information regarding contributions can be found in Note 5.

Generally, all covered employees hired before July 1, 2000 who were not covered under another state-sponsored retirement plan are eligible for membership in the Closed Plan. All covered employees hired on or after July 1, 2000 are eligible for membership in the Year 2000 Plan.

Membership in the Closed and Year 2000 Plans consisted of the following:

	FY05		FY05	FY04
	<u>Closed</u>	<u>Year 2000</u>	<u>Total</u>	<u>Total</u>
Retirees, beneficiaries, and disabilities currently receiving benefits	5,223	1,612	6,835	6,731
Terminated employees entitled to but not yet receiving benefits	1,369	1	1,370	1,285
Active employees				
Vested	6,366	73	6,439	6,218
Non-Vested	<u>5</u>	<u>2,722</u>	<u>2,727</u>	<u>2,784</u>
<b>Total membership</b>	<b>12,963</b>	<b>4,408</b>	<b>17,371</b>	<b>17,018</b>

### **Closed Plan Description**

Employees covered by the plan are fully vested for benefits upon receiving five years of creditable service. Under the Closed Plan, MoDOT and civilian employees may retire with full benefits upon the earliest of attaining:

- Age 65 and active with 4 years of service;
- Age 65 with 5 years of service;
- Age 60 with 15 years of service; or
- Age 48 with age and service equaling 80 or more (Rule of 80).



# *Notes to the Financial Statements*

*For the Years Ended June 30, 2005 and 2004*

For uniformed patrol members the following provisions apply:

- Age 55 and active with 4 or more years of service;
- Age 55 and terminated-vested with 5 years of service;
- Age 48 with age and service equaling 80 or more (Rule of 80); or
- Mandatory retirement at age 60 from active status.

All non-uniformed members may retire early with reduced benefits at age 55 with at least 10 years of service.

The base benefit in the Closed Plan is equal to 1.6% multiplied by the final average pay multiplied by years of creditable service. For members of the uniformed patrol, the base benefit is calculated by applying the same formula and then multiplying the product by 1.333333.

Retired uniformed members will receive an additional benefit of \$90 per month (plus COLAs) until attainment of age 65. This payment; however, is reduced by any amount earned during gainful employment. This benefit is not available to uniformed members hired after January 1, 1995.

For members employed prior to August 28, 1997, cost-of-living adjustments (COLAs) are provided annually based on 80% of the change in the consumer price index for all urban consumers for the United States (CPI-U) with a minimum rate of 4%, and a maximum rate of 5%, until the cumulative amount of COLAs equals 65% of the original benefit. Thereafter the 4% minimum rate is eliminated and the annual COLAs rate will be equal to 80% of the increase in the CPI-U with an annual maximum of 5%. For members employed on or after August 28, 1997, COLAs are provided annually based on 80% of the increase in the CPI-U up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 60 or 120 month guaranteed payment options are available to all members. Joint and 50% or 100% survivor options are available if married at the time of retirement. The reduction for the joint & 100% survivor option is based on the difference between the age of the member and the survivor. In the Closed Plan, there is no reduction for the joint and 50% survivor option.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement and the spouse preceded the member in death and then a remarriage occurred.

The member has one year from the date of marriage to re-elect and name a new spouse.

All members who retire from active employment or began receiving normal or work-related disability benefits on or after September 28, 1985, are provided a \$5,000 death benefit payable to designated beneficiaries.

# *Notes to the Financial Statements*

*For the Years Ended June 30, 2005 and 2004*

The BackDROP is a payment option that is available to eligible members upon retirement. This option provides for a benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had he/she left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

## **Year 2000 Plan Description**

Employees covered by the plan are fully vested for benefits upon receiving five years of creditable service. Under the Year 2000 Plan, employees may retire with full benefits upon the earliest of attaining:

- Age 62 and with 5 years of service
- Age 48 with age and service equaling 80 or more (Rule of 80)

Mandatory retirement for active uniformed members is age 60 with 5 or more years of service. All members may retire early with reduced benefits at age 57 with at least 5 years of service.

The base benefit in the Year 2000 Plan is equal to 1.7% multiplied by the final average pay multiplied by years of creditable service. For those retiring under the Rule of 80, an additional temporary benefit equivalent to 0.8% multiplied by final average pay multiplied by years of creditable service is payable until age 62.

COLAs are provided annually based on 80% of the change in the CPI-U up to a maximum rate of 5%.

The life income annuity payment option (with no provision for survivorship) and the life income with 120 or 180 months guaranteed payment options are available to all members. Joint and 50% or 100% survivorship options are available if married at the time of retirement. The reduction for the joint and 50% or 100% survivor options are based on the member's age at retirement, as well as the age difference between the age of the member and the survivor.

If a reduced joint and survivor option is chosen at the time of retirement and the spouse precedes the member in death, the benefit will revert back (pop-up) to a normal annuity.

Members may name a new spouse if:

- They were single at retirement and since married;
- They elected a spouse option at the time of retirement and the spouse preceded the member in death and then a remarriage occurred.

The member has one year from the date of marriage to re-elect and name a new spouse.

All members who retire from active employment or began receiving work related disability benefits on or after July 1, 2000, are provided a \$5,000 death benefit payable to designated beneficiaries.

# *Notes to the Financial Statements*

*For the Years Ended June 30, 2005 and 2004*

The BackDROP is a payment option that may be available to members upon retirement. This option provides for a monthly benefit to be calculated as if the member elected to retire at a previous date. If the BackDROP is elected, the monthly benefit payable on the actual retirement date is based on the benefit that would have been received by the member had they left employment and retired on the BackDROP date. In addition, the member will receive a lump sum payment equal to 90% of the life income annuity amount the member would have received during the BackDROP period. This lump sum amount includes any temporary benefits, COLAs and other benefit increases; also, credit will be received for the unused sick leave balance as of the date of retirement.

## **NOTE 3 – DEPOSITS AND INVESTMENTS:**

Funds are invested by bank custodians and investment managers under policies and procedures established by the Board of Trustees. Section 104.150, RSMo., provides the authority for the Board to invest System funds.

### **Note 3 (a) - Deposit and Investment Policies**

#### **Concentration of Credit Risk**

*Concentration of credit risk is the risk of loss attributed to the magnitude of the System's investment in a single issuer.* MPERS policies limit each equity manager to investing a maximum of 5% of the market value of the portfolio in any single company. Fixed income managers are limited to investing 3% of the portfolio into obligations of a single corporation. Obligations of the U.S. Government or U.S. Government agencies may be held in any amounts.

#### **Investment Custodial Credit Risk**

*Custodial credit risk is an investment risk in that, in the event of the failure of the counterparty to a transaction, MPERS will not be able to recover the value of its investment or the collateral securities in the possession of an outside party.* Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in MPERS name, and are held by either: a) the counterparty or b) the counterparty's trust department or agent but not in MPERS name. It is MPERS policy to require all investments be clearly marked as to ownership and, to the extent possible, registered in MPERS name.

#### **Cash Deposit Custodial Credit Risk**

*Cash deposit custodial credit risk is the risk that, in the event of the failure of depository financial institution, MPERS will not be able to recover deposits or will not be able to recover collateral securities in the possession of an outside party.* Missouri state law requires all public funds be collateralized with acceptable securities having market values of at least 100% of the amount of funds on deposit (less any amount covered by FDIC insurance).

#### **Interest Rate Risk**

*Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment.* MPERS does not have a formal investment policy that limits investment maturities as a means of managing its exposure to interest rates. Interest rate risk is most prevalent within the fixed income allocation, where the Board of Trustees has set a target allocation as reflected in the investment policy. MPERS many investments include terms related to interest rate changes. These options are incorporated into individual manager strategies. The investments include benchmark indices, reset dates, and embedded options such as calls, puts, and mortgage prepayments. All such items are reported at fair value on the Statement of Plan Net Assets.

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## Investment Credit Risk

Investment credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. It is MPERS policy to limit fixed income managers to purchasing securities possessing a minimum credit rating of "Baa" by Moody's and "BBB" by Standard & Poor's. Issues subsequently downgraded below these ratings must be sold as soon as is prudently possible unless retention is approved by the Board of Trustees.

## Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. MPERS is subjected to foreign currency risk through its exposure to fixed income and equity investments that are denominated in a foreign currency. While a certain amount of this exposure is desired for diversification purposes, the investment policy does allow utilization of currency futures for defensive (hedging) purposes if deemed to be in the best interest of MPERS. The Board of Trustees has set a target allocation as reflected in the investment policy.

## Note 3 (b) - Cash Deposits

Cash balances include short-term securities held by the custodial bank to meet future obligations and operating balances held by the depository bank. As of June 30, 2005 and 2004, MPERS had carrying amounts of deposits of (\$1,396,770) and (\$1,670,900), respectively, and a bank balance of \$280 and \$99, respectively. The bank balances were covered by the FDIC. To maximize investment income, cash is invested in overnight repurchase agreements, thus causing the negative amounts reported. The balances in these repurchase agreements for 2005 and 2004 were \$2,900,263 and \$2,295,211 respectively.

## Note 3 (c) - Concentrations

No investments in any one organization (other than those issued or sponsored by the U.S. government and those in pooled investments) represent five percent of plan net assets.

## Note 3 (d) - Investments

	FY05		FY04	
	Cost	Fair Value	Cost	Fair Value
Government obligations	\$ 20,976,036	\$ 21,313,643	\$ 177,420,801	\$ 177,892,967
Corporate bonds	25,896,948	26,048,372	68,102,237	69,604,050
Stock and rights/warrants	678,266,889	767,671,130	745,480,754	822,278,903
Real estate	146,464,302	162,914,638	50,004,167	51,375,542
Timber	20,491,194	27,913,195	28,744,315	41,063,671
Mortgages & asset-backed securities	54,164,832	54,494,644	132,951,251	133,559,600
Absolute return	231,134,646	236,467,800	0	0
Tactical fixed income	100,379,667	104,082,785	0	0
Short-term investments	18,615,157	18,610,206	41,943,536	41,943,536
Securities lending collateral	158,192,848	158,192,848	150,084,860	150,084,860
Total Investments	<u>\$1,454,582,519</u>	<u>\$1,577,709,261</u>	<u>\$1,394,731,922</u>	<u>\$1,487,803,130</u>
Reconciliation to Statement of Plan Net Assets:				
Less: Repurchase agreements		\$ (2,900,263)		\$ (2,295,211)
Less: Securities lending collateral		<u>(158,192,848)</u>		<u>(150,084,860)</u>
Investments per Statement of Plan Net Assets		<u>\$1,416,616,150</u>		<u>\$1,335,423,059</u>

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **Note 3 (e) – Investment Interest Rate Risk (reported in thousands of dollars)**

The following is comprised of government obligations, corporate bonds, mortgages and asset-backed securities, and tactical fixed income on the Statement of Plan Net Assets.

Investment Type	Market Value	Investment Maturities (in years)			
		Less than 1	1 - 5	6 - 10	More than 10
Asset-Backed Securities	\$ 6,556	\$ 0	\$ 770	\$ 0	\$ 5,786
Commercial Mortgage-Backed Securities	9,518	0	643	0	8,875
Corporate Bonds	26,048	1,346	9,189	6,199	9,314
Government Agencies	477	0	477	0	0
Government Bonds	13,039	0	9,607	577	2,855
Government Mortgage-Backed Securities	26,582	0	0	2,900	23,682
Municipal/Provincial Bonds	7,798	0	595	2,836	4,367
Total	\$ 90,018	\$1,346	\$21,281	\$12,512	\$54,879
Pooled Investments	115,921				
Grand Total	<u>\$205,939</u>				

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **Note 3(f) – Investment Ratings**

The following is comprised of government obligations, corporate bonds, mortgages and asset-backed securities, and tactical fixed income on the Statement of Plan Net Assets.

Investment Type	S&P Rating	Market Value
Asset-Backed Securities	A	\$ 3,125,623
Asset-Backed Securities	AAA	3,430,348
Commercial Mortgage-Backed Securities	AAA	4,654,481
Commercial Mortgage-Backed Securities	not rated	1,035,427
Corporate Bonds	A	8,405,818
Corporate Bonds	AAA	2,683,941
Corporate Bonds	BB	1,541,104
Corporate Bonds	BBB	11,607,742
Corporate Bonds	not rated	1,809,767
Government Agencies	Agency	477,357
Government Bonds	Treasury	413,192
Government Bonds	AAA	12,382,384
Government Bonds	B	243,252
Government Mortgage-Backed Securities	Agency	36,854,354
Government Mortgage-Backed Securities	not rated	1,566,140
Municipal/Provincial Bonds	A	1,026,140
Non-Government Backed CMOs	AAA	10,108,912
Non-Government Backed CMOs	BBB	490,678
Pooled Investments	A	63,386,772
Pooled Investments	AAA	<u>40,696,013</u>
Total		<u>\$205,939,444</u>

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## Note 3 (g) – Investment Foreign Currency Risk

Investment Type and Foreign Currency	Maturity Date	Cash and Equivalents	Equities	Total
Australian dollar	n/a	\$ 25,192	\$ 20,290,039	\$ 20,315,231
British pound sterling	n/a	1,488,686	48,892,821	50,381,507
Canadian dollar	n/a	809,608	15,457,556	16,267,164
Czech koruna	n/a	(2,044,341)	2,116,014	71,673
Danish krone	n/a	(125,498)	1,850,423	1,724,925
Euro	n/a	4,302,174	87,549,811	91,851,985
Hong Kong dollar	n/a	3,113	12,255,359	12,258,472
Hungarian forint	n/a	(380,329)	0	(380,329)
Indonesian rupiah	n/a	48,021	540,244	588,265
Japanese yen	n/a	11,018,952	56,180,596	67,199,547
Lithuanian litas	n/a	0	43,958	43,958
Mexican peso	n/a	9,155	842,761	851,916
New Zealand dollar	n/a	14,129	489,393	503,522
Norwegian krone	n/a	(102,318)	9,308,145	9,205,827
Philippine peso	n/a	0	303,119	303,119
Polish zloty	n/a	(1,497,667)	0	(1,497,667)
Singapore dollar	n/a	1,919	0	1,919
South African rand	n/a	9,647	1,857,452	1,867,100
South Korean won	n/a	0	1,088,466	1,088,466
Swedish krona	n/a	44,536	10,970,852	11,015,388
Swiss franc	n/a	39,034	21,060,461	21,099,496
Thai baht	n/a	234	0	234
Turkish lira	n/a	(1,880,140)	10,594,438	8,714,299
Total Exposure Risk		\$11,784,107	\$301,691,909	\$313,476,016



# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **Note 3 (h) – Securities Lending**

In accordance with the Board of Trustees' investment policy, MPERS participates in a Securities Lending program. The program is administered by The Northern Trust Company. There are no restrictions on the amount of securities that may be lent.

Securities that may be loaned include U.S. government and agency securities, corporate equity, and fixed income securities. Collateral may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned in exchange for collateral valued at 102% of the market value of the securities plus any accrued interest. Non-U.S. securities are loaned in exchange for collateral valued at 105% of the market value of the securities plus any accrued interest. There was no credit risk exposure, since the amount of collateral exceeded the amount of the loans.

Non-cash collateral cannot be pledged or sold unless the borrower defaults. The average term of the System's loans was approximately 99 days and 63 days, as of June 30, 2005 and June 30, 2004, respectively. Cash open collateral is invested in a short term investment pool, which had an interest sensitivity of 28 days and 24 days, as of June 30, 2005 and June 30, 2004, respectively. Cash collateral may also be invested separately in "term loans", in which case the investments match the loan term. These loans can be terminated on demand by either lender or borrower. There were no known violations of legal or contractual provisions, or borrower or lending agent default losses. There are no dividends or coupon payments owing on the securities lent. Securities lending earnings are credited on approximately the fifteenth day of the following month.

Indemnification deals with a situation in which a client's securities would not be returned due to the insolvency of a borrower and Northern Trust would fail to live up to its contractual responsibilities relating to the lending of those securities. Northern Trust's responsibilities include performing appropriate borrower and collateral investment credit analyses, demanding adequate types and levels of collateral, and complying with applicable Department of Labor and Federal Financial Institutions Examination Council regulations concerning securities lending.

The collateral held (including both cash collateral recognized in the Statement of Plan Net Assets and non-cash collateral) were as follows:

<b>Investment Type</b>	<b>2005</b>	<b>2004</b>
Equities	\$147,714,305	\$ 59,723,508
Government & government sponsored securities	12,758,545	93,705,890
Corporate bonds	3,964,701	13,123,546
	<u>\$164,437,551</u>	<u>\$166,552,945</u>

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **NOTE 4 – RECEIVABLES:**

Receivables consist primarily of pending investment trades, interest and dividends, and employer contributions to be remitted in July 2005.

Type	2005	2004
Contributions-MoDOT	\$ 2,990,565	\$ 2,535,201
Contributions-MSHP Civilian	426,150	382,254
Contributions-MSHP Uniformed	924,830	771,588
Contributions-Retirement System	7,709	5,464
Commission Recapture	1,372	13,905
Securities Lending	417,370	29,779
Amounts Due From Members	34,529	809
Investment Interest & Income	3,021,777	4,328,993
Investment Sales	23,613,763	14,794,017
	<u>\$ 31,438,067</u>	<u>\$ 22,862,012</u>

## **NOTE 5 – CONTRIBUTIONS:**

Contributions to MPERS are made by MoDOT, the Highway Patrol, and MPERS. As a defined benefit plan, employees do not contribute to the Retirement System. MPERS funding policy provides for actuarially determined employer contributions using the entry-age normal cost method on a closed group basis (consisting of normal cost and amortization of any unfunded accrued liabilities over a 31-year period. (The objective is to reduce the period by one year each year at least until FY07.) Actuarially determined rates, expressed as percentages of annual covered payroll, provide for amounts sufficient to fund those benefits designated by State statute to be funded in advance. Additionally, administrative expenses are financed through the contribution rate. Actuarial assumptions used to compute contribution requirements are the same as those used to compute the pension benefit obligation.

Required employer contributions totaling \$102,240,145 and \$86,724,914 for fiscal years 2005 and 2004, respectively, represent funding of normal costs and amortization of the unfunded accrued liability. Actual contributions made were 100% of required contributions. Contribution rates determined by the System's actuary for the years ended June 30, 2005 and 2004 are shown below. The Board established actual rates to be the same as the actuarially determined rates.

	FY05		FY04	
	MoDOT, MPERS & Civilian Patrol	Uniformed Patrol	MoDOT, MPERS & Civilian Patrol	Uniformed Patrol
Total Contribution Rate	28.28%	43.54%	25.54%	38.40%

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **NOTE 6 – RELATED PARTY TRANSACTIONS:**

MPERS reimbursed MoDOT for accounting, legal and information technology services. This amounted to administrative expenses of \$113,947 and \$101,165 during FY05 and FY04, respectively.

MoDOT rents office space from MPERS. This contract is effective from July 2003 through May 2006. This amounted to other income of \$31,104 and \$33,696 during FY05 and FY04, respectively.

## **NOTE 7 – COMPENSATED DEFERRED ABSENCES:**

Expenses for accumulated annual leave and compensatory time in lieu of paid overtime earned by employees are recorded when earned by the employee. The balance owed was \$79,327 and \$65,048 as of June 30, 2005 and 2004, respectively.

## **NOTE 8 – PERSONAL SERVICES AND RETIREMENT PLAN:**

MPERS employed 12 full-time employees at June 30, 2005 and 11 full-time employees at June 30, 2004. Two former MPERS employees have retired. Full-time employees are also members of the Retirement System. For these employees, MPERS accrued 28.28% of payroll during FY05, amounting to \$174,226; and 25.54% of payroll during FY04, amounting to \$119,873. This amount has been recorded as both a contribution and administrative expense. Information regarding the retirement plans can be found in Notes 2 and 5.

## **NOTE 9 – OTHER POST EMPLOYMENT BENEFITS:**

In addition to the retirement benefits described above, MPERS provides a portion of health care insurance, in accordance with Missouri state statutes, for its employees who retired from the System with a minimum of 5 years of state service and who participate in the MoDOT and Patrol Insurance Plan. MPERS and participant contributions are established by the Insurance Plan's Board of Trustees and are approved by the Missouri Highways and Transportation Commission. There is currently one eligible participating retiree. Costs are recognized on a pay-as-you-go basis, with a cost of \$2,681 and of \$2,610 for FY05 and FY04, respectively, representing approximately 40% of the total insurance cost.

## **NOTE 10 – CAPITAL ASSETS:**

Changes in capital assets are summarized below (in thousands):

	06/30/04 Balance	Additions	Deletions/ Retirements	06/30/05 Balance
Land and improvements (not depreciated)	\$ 84	\$ 0	\$ 0	\$ 84
Buildings	582	0	0	582
Office Equipment	110	19	8	121
Less: Accumulated Depreciation	(68)	(35)	(7)	(96)
Total	\$ 708	\$ (16)	\$ 1	\$ 691

# Notes to the Financial Statements

For the Years Ended June 30, 2005 and 2004

## **NOTE 11 – LONG-TERM OBLIGATIONS - CAPITAL LEASES:**

MPERS entered into a capital lease-purchase agreement in 2004 for a Xerox Workcentre Pro, requiring monthly installments of \$413 through September 30, 2008, interest at 7.74%. The cost of the copier/printer was \$22,490 and is included in capital assets. Changes in long-term obligations were as follows:

Type	Beginning Balance	Additions	Reductions	Ending Balance
Capital Leases	\$17,899	\$0	\$3,697	\$14,202

Future principal and interest requirements for the lease-purchase are as follows:

Year Ending June 30	Amount
2006	\$ 4,959
2007	4,959
2008	4,959
2009	1,240
Total minimum lease payments	\$16,117
Less: interest amount	(1,915)
Present value of minimum lease payments	\$14,202

## **NOTE 12 – OPERATING LEASES:**

MPERS is committed under leases for various office equipment (copier/printer, postage machine, and investment technology services) through October 2007. Expenditures for the year ended June 30, 2005 and 2004 amounted to \$27,975 and \$21,428 respectively. Future minimum lease payments for these leases are as follows:

Year Ending June 30	Amount
2006	\$17,775
2007	2,185
Total minimum lease payments	\$19,960

# *Notes to the Financial Statements*

*For the Years Ended June 30, 2005 and 2004*

## **NOTE 13 – RISK MANAGEMENT:**

MPERS is exposed to various risks of loss related to natural disasters, asset theft or damage, errors and omissions, torts, and employee injuries.

MPERS has purchased commercial insurance related to capital asset loss and damage. Ancillary coverage provided through the property policy includes coverage for accounts receivable, loss of money and securities, employee dishonesty, and forgery and alterations. MPERS carries a \$2 million umbrella liability policy. MPERS has coverage through Missouri Highways and Transportation Commission's Self-Insurance Fund related to workers' compensation. All state employees and officers are covered by the State's Legal Expense Fund, and MPERS has purchased surety bonds for the director and staff. In addition, the computer mainframe is housed off-site.

## **NOTE 14 – COMPARATIVE STATEMENTS:**

Information has been recategorized to improve comparability.

# Required Supplementary Information

## Schedule of Funding Progress <sup>(1)</sup>

Date of Valuation	Actuarial Asset Value (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
06/30/1996	\$ 916,553,828	\$ 1,429,910,844	\$ 513,357,016	64.10%	\$ 254,712,739	201.54%
06/30/1997	1,015,906,708	1,651,811,690	635,904,982	61.50	271,070,643	234.59
06/30/1998	1,126,961,804	1,744,052,411	617,090,607	64.62	278,690,426	221.43
06/30/1999 <sup>(3)</sup>	1,242,744,403	2,052,700,427	809,956,023	60.54	288,068,083 <sup>(2)</sup>	281.17
06/30/2000 <sup>(4)</sup>	1,422,796,011	2,188,826,322	766,030,311	65.00	301,421,805 <sup>(2)</sup>	254.14
06/30/2001	1,520,800,409	2,301,402,527	780,602,118	66.08	323,400,023 <sup>(2)</sup>	241.37
06/30/2002	1,450,507,432	2,358,452,163	907,944,731	61.50	308,654,239 <sup>(2)</sup>	294.16
06/30/2003	1,363,952,522	2,418,145,741	1,054,193,219	56.20	319,345,949 <sup>(2)</sup>	330.11
06/30/2004	1,331,588,207	2,492,918,976	1,161,330,769	53.41	316,224,468 <sup>(2)</sup>	367.25
06/30/2005 <sup>(4)</sup>	1,417,348,982	2,627,409,025	1,210,060,043	53.94	334,030,151 <sup>(2)</sup>	362.26

<sup>(1)</sup> Prior to 2003 this schedule was not required for the LTD Plan because it used the aggregate funding method. Therefore the assets and liabilities were excluded prior to 2003. In 2003 the LTD Plan was merged into the base plan. Assets and liabilities for existing LTD members are included beginning in 2003.

<sup>(2)</sup> Values are estimated from contribution rate and amount.

<sup>(3)</sup> Introduction of Year 2000 Plan; change in actuary.

<sup>(4)</sup> New assumptions adopted.

## Notes to the Schedules of Trend Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date .....	June 30, 2005
Actuarial Cost Method .....	Entry Age
Amortized Method .....	Level percent of payroll
Remaining Amortization Period .....	30 years from July 1, 2006
Asset Valuation Method .....	3-year smoothing
Actuarial Assumptions:	
Investment Rate of Return .....	8.25%
Projected Salary Increase .....	3.75% to 11.75%
Cost-of-Living Adjustments .....	2.6% Compound
Includes Wage Inflation at .....	3.75%

# Required Supplementary Information

## Schedule of Employer Contributions <sup>(1)</sup>

### Uniformed Patrol

Fiscal Year Ending	Covered Payroll	Actual Employer Contributions	Actual Employer Contribution %	Annual Required Contribution (ARC) %	Annual Required Contribution	Percentage of ARC Contributed
06/30/1996	\$39,557,621	\$15,743,114	39.80%	39.80%	\$15,743,114	100.00%
06/30/1997	42,242,106	16,546,233	39.17	39.17	16,546,233	100.00
06/30/1998	43,987,039	16,600,708	37.74	37.74	16,600,708	100.00
06/30/1999 <sup>(3)</sup>	43,882,573 <sup>(2)</sup>	13,901,999	31.68	31.68	13,901,999	100.00
06/30/2000 <sup>(4)</sup>	44,297,237 <sup>(2)</sup>	13,484,079	30.44	30.44	13,484,079	100.00
06/30/2001	50,088,675 <sup>(2)</sup>	17,500,983	34.94	34.94	17,500,983	100.00
06/30/2002	47,681,512 <sup>(2)</sup>	16,659,920	34.94	34.94 <sup>(5)</sup>	16,659,920	100.00
06/30/2003	48,172,519 <sup>(2)</sup>	16,831,478	34.94	34.94 <sup>(5)</sup>	16,831,478	100.00
06/30/2004	46,333,484 <sup>(2)</sup>	17,792,058	38.40	38.40	17,792,058	100.00
06/30/2005	50,959,490 <sup>(2)</sup>	22,187,762	43.54	43.54	22,187,762	100.00

<sup>(1)</sup> Prior to 2003 this schedule was not required for the LTD Plan because it used the aggregate funding method. Therefore the assets and liabilities were excluded prior to 2003. In 2003 the LTD Plan was merged into the base plan. Assets and liabilities for existing LTD members are included beginning in 2003.

<sup>(2)</sup> Values are estimated from contribution rate and amount.

<sup>(3)</sup> Introduction of Year 2000 Plan; change in actuary.

<sup>(4)</sup> New assumptions adopted.

<sup>(5)</sup> The ARC is the rate adopted by the Retirement Board. This rate exceeded the actuarially calculated rate.

### MoDOT, Civilian Patrol & MPERS

Fiscal Year Ending	Covered Payroll	Actual Employer Contributions	Actual Employer Contribution %	Annual Required Contribution (ARC) %	Annual Required Contribution	Percentage of ARC Contributed
06/30/1996	\$215,155,118	\$56,842,321	26.42%	26.42%	\$56,842,321	100.00%
06/30/1997	228,828,537	59,838,662	26.15	26.15	59,838,662	100.00
06/30/1998	234,703,387	61,140,232	26.05	26.05	61,140,232	100.00
06/30/1999 <sup>(3)</sup>	244,185,511 <sup>(2)</sup>	54,990,577	22.52	22.52	54,990,577	100.00
06/30/2000 <sup>(4)</sup>	257,124,568 <sup>(2)</sup>	56,567,405	22.00	22.00	56,567,405	100.00
06/30/2001	273,311,348 <sup>(2)</sup>	63,654,213	23.29	23.29	63,654,213	100.00
06/30/2002	260,972,727 <sup>(2)</sup>	60,780,548	23.29	23.29 <sup>(5)</sup>	60,780,548	100.00
06/30/2003	271,173,431 <sup>(2)</sup>	63,156,292	23.29	23.29 <sup>(5)</sup>	63,156,292	100.00
06/30/2004	269,890,983 <sup>(2)</sup>	68,932,856	25.54	25.54	68,932,856	100.00
06/30/2005	283,070,661 <sup>(2)</sup>	80,052,383	28.28	28.28	80,052,383	100.00

<sup>(1)</sup> Prior to 2003 this schedule was not required for the LTD Plan because it used the aggregate funding method. Therefore the assets and liabilities were excluded prior to 2003. In 2003 the LTD Plan was merged into the base plan. Assets and liabilities for existing LTD members are included beginning in 2003.

<sup>(2)</sup> Values are estimated from contribution rate and amount.

<sup>(3)</sup> Introduction of Year 2000 Plan; change in actuary.

<sup>(4)</sup> New assumptions adopted.

<sup>(5)</sup> The ARC is the rate adopted by the Retirement Board. This rate exceeded the actuarially calculated rate.

# Supplementary Information

## Schedule of Administrative Expenses

	FY05	FY04
<b>Personal Services:</b>		
Salary expense	\$ 623,977	\$ 466,237
Employee benefit expense	314,951	273,965
Total Personal Services	938,928	740,202
<b>Professional Services:</b>		
Actuarial services	75,800	117,937
Computer services	270,443	290,640
Audit expense	9,725	9,260
Disability program	35,632	19,938
Consultant fees	124,330	73,500
Other	2,430	501
Total Professional Services	518,360	511,776
<b>Miscellaneous:</b>		
MoDOT reimbursement	113,947	101,165
Depreciation	34,126	30,831
Meetings/Travel/Education	109,346	68,462
Equipment/Supplies	35,565	38,945
Printing/Postage	93,733	66,788
Insurance premium	4,559	2,436
Bank service charge	5,499	5,517
Building expenses	28,144	24,950
Other	34,385	48,062
Total Miscellaneous	459,304	387,155
<b>Total Administrative Expenses</b>	<b>\$ 1,916,592</b>	<b>\$ 1,639,133</b>



# Supplementary Information

## Schedule of Investment Expenses

	FY05	FY04
<b>Investment Income Expenses:</b>		
Management Fees		
Acadian Asset Management	\$ 878,042	\$ 0
AQR	166,278	0
Alliance Capital	0	222,698
Artisan Partners	564,028	531,172
Barclays Global Investors	771,528	205,708
Blackrock, Inc.	94,700	0
Bridgewater Associates	802,900	0
Deutsche Asset Management	181,984	0
GMO	174,811	0
ING Clarion	275,399	0
Intech	446,091	209,488
Julius Baer Investment Management	735,252	0
Och-Ziff Real Estate	112,500	0
Principal Global Investors	736,893	104,971
RMK Timberland	263,448	282,601
Rockwood Capital Advisors	70,816	245,677
Rothschild Asset Management	659,275	597,078
Silchester International Investors	292,125	45,139
The Northern Trust Company	13,529	44,297
UMB Investment Advisors	42,944	877,316
Urdang	187,500	0
Wellington Management Company	0	313,342
Western Asset Management Co.	114,710	0
Total Management Fees	\$ 7,584,752	\$ 3,679,487
Investment custodial fee	\$ 289,869	\$ 150,175
Performance management	29,125	18,150
General Consultant (monitoring) fee	150,000	123,750
Other investment expenses	214,557	(5,931)
<b>Total Investment Income Expenses</b>	<b>\$ 8,268,303</b>	<b>\$ 3,965,631</b>
<b>Securities Lending Expenses:</b>		
Borrower Rebates	\$ 3,069,413	\$ 1,468,174
Bank Fees	217,002	142,798
<b>Total Securities Lending Expenses</b>	<b>\$ 3,286,414</b>	<b>\$ 1,610,972</b>

# *Supplementary Information*

## **Schedule of Professional and Consultant Expenses**

	<b>FY05</b>	<b>FY04</b>
Actuarial services	\$ 75,800	\$ 117,937
Computer services	270,443	290,640
Audit services	9,725	9,260
Disability administrative services	35,632	19,938
Legislative consultant	22,500	15,000
Customer service, benefit delivery, and technology improvement project	95,330	50,000
Insurance consultant	6,500	0
Salary and benefits study	0	8,500
Other	2,430	501
<b>Total Professional and Consultant Expenses</b>	<b><u>\$ 518,360</u></b>	<b><u>\$ 511,776</u></b>

# *Investment Section*

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# Report on Investment Activity

Norm Robinson  
Executive Director



Susie Dahl  
Assistant Executive Director

December 1, 2005

To the members of the MoDOT & Patrol Employees' Retirement System:

It is my pleasure to provide you with the investment section of this year's comprehensive annual financial report. This section provides an overview of developments and performance within the investment portfolio.

The MPERS investment portfolio generated a total return of 11.4% in fiscal year 2005 (FY05), comparing favorably to both the actuarial return target of 8.25% and the policy index of 11.2% (the return if MPERS would have passively invested across the broad asset classes). International equity was the best performing asset class, generating an 18.8% return for the year, followed by the System's real estate portfolio that produced a 15.1% return over the period. The strong performance in FY05 helped bring MPERS three-year return to 9.8%, again exceeding the actuarial target of 8.25%. The five and ten year results remain below the actuarial target at 3.8% and 7.4%, respectively.

A closer look at the paragraph above illustrates the reasoning and objective behind the activity in today's investment portfolio. Even after the strong performance in FY05, the longer-term performance of the fund remains below the actuarial assumed rate of 8.25%. This rate is critical to administering a retirement system, as it represents the assumed rate of growth for system liabilities, along with the corresponding return target for the investment portfolio. Holding everything else equal, if investment returns fall below this rate, MPERS funded status will fall and our plan sponsors (MoDOT and the Highway Patrol) will be forced to increase contributions into the fund. If assets grow at a faster pace, then the funded status improves and our plan sponsors should be able to reduce contributions and/or make funds available for other benefits.

Throughout much of the 80's and 90's, a conservative asset allocation of 55% equities and 45% bonds generated double-digit annual returns, well in excess of the assumed actuarial rate of return. Today, the investment outlook is much more challenging. Returns in the fixed income markets, which historically have averaged around 8 percent, are now projected between 4 and 5 percent. The equity markets, although rebounding nicely in recent years from the prolonged correction at the turn of the century, once again appear vulnerable at their existing valuations. As a result, we no longer expect the traditional 55/45 mix of stocks and bonds to deliver returns in excess of 8.25%.

Given the clear disconnect between assumed and projected rates of return, in the summer of 2004 the Board directed staff and Summit Strategies (the System's external asset consultant) to perform an asset / liability study, with the goal of developing an investment portfolio that will achieve the targeted return without subjecting the System to unnecessary risk. The study included an in-depth analysis of both traditional and non-traditional asset classes. In the past, the issue of investing in non-traditional asset classes simply wasn't a priority, since the traditional asset classes of stocks and bonds were capable of generating the assumed rate of return. Institutional investors, acknowledging the low return environment with traditional asset classes, are increasingly looking to these alternative asset classes as a means to both enhance returns and reduce the overall volatility (risk) of the investment portfolio.



# *Report on Investment Activity*

As expected, the study projected a return of only 7.2% if MPERS were to keep the existing asset allocation (versus the actuarial assumed rate of 8.25%). At this point, the Board had several options: 1) adjust the assumed actuarial rate of return downward to match the projected return on the existing portfolio, which would force our plan sponsors to increase contributions in a very tight budgetary environment; 2) increase the allocation to the "riskier" asset classes (in our case equities) and hope the glory days of the 90's return where equities will generate double digit returns; or 3) evaluate the inclusion of more non-traditional portfolio management techniques that could both improve investment returns and reduce overall plan volatility.

Based on extensive discussion and research from the asset / liability study, the board decided on option 3 and adopted a new asset allocation to better position the portfolio to produce the 8.25% required return. The supporting pages provide additional details behind the changes and revisions, but the most significant changes are summarized below:


- A new 10% allocation to private equity. Despite the extended length of time necessary to implement, private equity offers the potential for significant return premiums over public equity markets and can help "bridge the gap" with the current low return environment.
- Given the low expected returns in the fixed income sector, the Board reduced its target allocation from 30% to 16%, and approved the use of absolute return strategies to enhance returns within the asset class.
- An increased allocation to real estate from 5% to 10%. The yield spread on private real estate relative to traditional fixed income remains very attractive.
- An increased allocation to international equities, creating an equal 50/50 weighting between domestic and international stocks (each at 22.5% of assets). Securities denominated in foreign currencies offer protection against a depreciating U.S. dollar and provide diversification benefits to the overall equity portfolio.

In the case of MPERS, utilizing the additional asset classes and improved management techniques improved our return projections from 7.2% to 8.3%, while reducing the overall volatility (risk) projections by 1.4% per year. As a result of the changes, the board could maintain the actuarial return assumption of 8.25% and avoid increasing contribution rates to our plan sponsors.

Most of the remaining year was spent implementing the changes resulting from the asset / liability study, and we have been fortunate to see some short-term success. Our one-year return of 11.4% looks great relative to our 8.25% return target, but I am most proud of the additional return relative to the 10.2% policy index. This represents the return over and above what would have been earned by investing passively in the broad asset classes.

The following pages provide additional information on the activity and current holdings within the investment portfolio. Before concluding, I want to offer a special thank you to the Board of Trustees and our Executive Director for creating an environment whereby all of these positive changes could occur. I am confident the changes underway will make a big difference for the beneficiaries of the System, and can't help but believe the best is yet to come.

Sincerely,



Larry Krummen, CFA  
Chief Investment Officer

# Letter From Consultant



**Summit Strategies Group**

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fax 314/727-6068  
www.summitstrategies.com

October 4, 2005

Mr. Norman Robinson

Executive Director

MoDOT & Patrol Employees' Retirement System

1913 William Street

Jefferson City, MO 65109

Dear Mr. Robinson:

The fiscal year ended June 30, 2005 witnessed a number of significant steps in the evolution of the MoDOT & Patrol Employees' Retirement System. In the first quarter, Summit Strategies Group completed an asset/liability study that provided a framework for further diversification of the System's investments. The resulting asset allocation strategy adopted by the Board is expected to increase MPERS' return while significantly lowering the overall risk to the System – two very positive outcomes.

Though we are in the final stages of the implementation process, and while longer-term performance comparisons are more meaningful, I am pleased to report a strong start for the new program. Performance for the fiscal year ended June 30, 2005 was quite good both in absolute and relative terms. With total assets of \$1,435,962,316 on June 30 the return was 11.4% for the year, 1.0% ahead of the policy benchmark and a strong 2.4% ahead of its public fund peers. In fact, MPERS' performance was in the top 10% of the public funds in the ICC Universe for the year! For the 3- and 5-year periods, the fund earned 9.8% and 3.8%. These returns were calculated in compliance with AIMR Performance Presentation Standards.

Equities were the star performers – domestic stocks generated 10.2%, and international stocks earned a strong 18.8% for the year – collectively 2.1% ahead of the combined broad market indices. For the 3- and 5-year periods, your equity managers combined to beat their markets by 1.1% and 1.2% as well. Returns for the last 3 years have been quite strong relative to those experienced in 2000-2002; we don't believe them to be sustainable at these levels, and expect returns going forward to be in the 7 to 9% range for equities. The fixed income portfolio earned 6.4% for the fiscal year, less than equities but certainly in line with historical averages.

The final paragraph of my letter to you last year read in part: "Since assuming our role as your investment consultant we have taken many steps with you, your staff and the Board of Trustees to improve upon the investment program of the MoDOT & Patrol Employees' Retirement System. I will cover the success of those efforts in next year's performance review and in subsequent reviews in the years to come." As reflected in the preceding paragraphs I am most pleased to report that the last year has indeed been successful, and I also believe your portfolio is positioned for future success as well. On behalf of all of us at Summit Strategies Group, thanks to all of you for allowing us to be a part of it.

Sincerely,

Mark A. Caplinger, CFA  
Senior Vice President

*Investment Section*



# Investment Activity Overview

## Summary of Investment Policy

The primary objective of the Missouri Department of Transportation & Highway Patrol Employees' Retirement System (MPERS) is to provide active and retired members with adequate retirement benefits. The investment portfolio is constructed to generate a total return that, when added to employer contributions, is sufficient to meet benefit obligations. Following prudent standards for preservation of capital, the goal is to achieve the highest possible rate of return consistent with the plan's tolerance for risk as determined by the Board of Trustees in its role as fiduciary.

Investment management is delegated to external asset managers. The managers will operate within the set of guidelines, objectives and constraints set forth in the respective investment management agreement.

## Market Value of Investments

As of June 30, 2005, the MPERS investment portfolio had a market value of \$1.44 billion, representing an increase of \$86.4 million over FY04. Over the course of the year, an additional \$62.7 million was transferred out of the fund to meet benefit payments. When viewed together, asset growth from investments equated to \$149.1 million.

## Schedule of Investment Results

The MPERS investment portfolio returned 11.38% in FY05, based on time-weighted rates of return and market valuations. Performance for the various sub-asset classes and their respective benchmark indices is listed below. All returns are calculated using AIMR performance presentation standards.

<b>Investment Performance</b>	<b>1 Year</b>	<b>3 Year</b>	<b>5 Year</b>
<b>Total Fund</b>	<b>11.38%</b>	<b>9.82%</b>	<b>3.80%</b>
Policy Benchmark	10.20	9.40	3.60
<b>Domestic Equity</b>	<b>10.17</b>	<b>10.54</b>	<b>-0.55</b>
Russell 3000	8.05	9.46	-1.35
<b>International Equity</b>	<b>18.83</b>	<b>15.57</b>	<b>3.21</b>
MSCI ACWI ex-US	16.95	14.08	0.76
Total Equity	12.73	11.77	0.40
<b>Global Composite</b>	<b>10.20</b>	<b>10.50</b>	<b>-0.90</b>
<b>Fixed Income Composite</b>	<b>6.21</b>	<b>5.08</b>	<b>6.72</b>
Lehman Universal Index	7.42	6.56	7.62
<b>Real Estate</b>	<b>15.12</b>	<b>-</b>	<b>-</b>
NCREIF Property Index	15.55	10.74	10.15
<b>Timber</b>	<b>14.68</b>	<b>5.75</b>	<b>6.04</b>
NCREIF Timberland Index	10.95	7.30	3.87



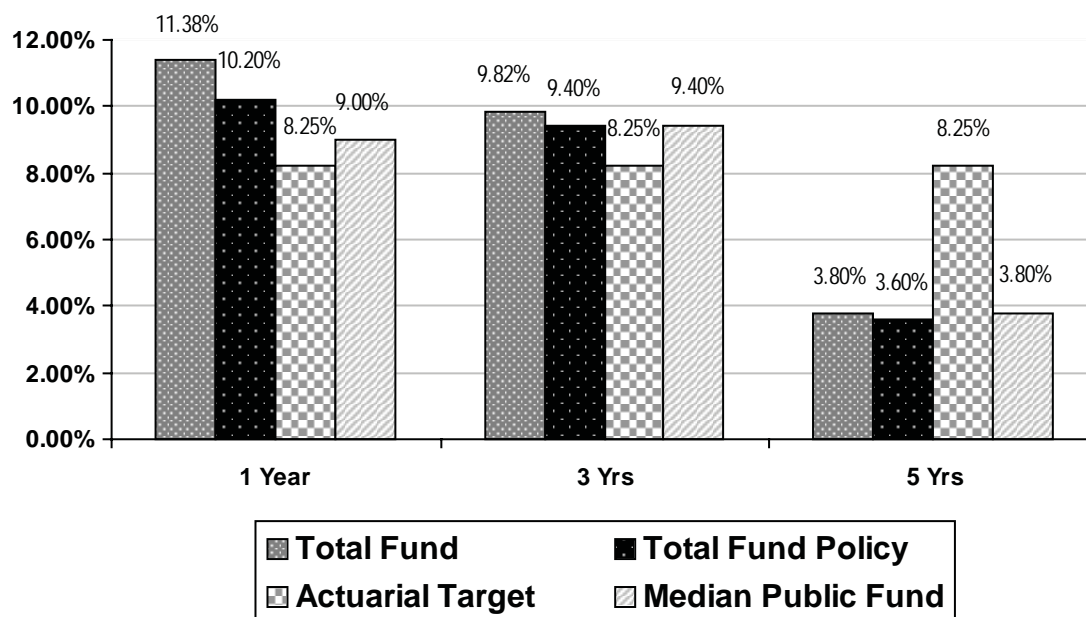
# Investment Activity Overview

When measuring performance, the Board of Trustees looks at three primary performance objectives: a) achieve the actuarial assumed rate of return of 8.25%, b) outperform a policy benchmark that represents the return that could be achieved by investing passively in the broad markets in the same percentages to MPERS target asset allocation, and c) rank at or above the median public fund investment return.

MPERS one-year return compares favorably to all three of the performance goals listed above. International equity was the best performing asset class, generating an 18.8% return for the year, followed by the system's real estate portfolio that produced a 15.1% return over the period. Most of the excess return above the policy benchmark is attributed to manager selection within the public equity sectors, which collectively returned 12.73% over the period versus a global benchmark of 10.6%.

The strong performance in FY05 helped bring MPERS three-year return to 9.8%, exceeding the actuarial target of 8.25%, but was not enough to bring the longer-term results above this target. The five and ten-year returns stand at 3.8% and 7.4%, respectively. The underperformance of the fund relative to long-term policy benchmarks and the public fund peer universe is part of the reasoning behind the current restructuring underway at MPERS. Details of these changes are contained in the following pages.

Historical returns versus the various performance goals are listed below:



## Asset Allocation Overview

At the onset of fiscal year 2005, MPERS broad asset allocation targets were 60% public equity (40% Domestic and 20% International), 30% public debt, 5% real estate, 3% timber and 2% cash. As a result of an extensive asset / liability study, throughout the year a number of changes were made to take advantage of relative opportunities in the marketplace. The study projected a return of only 7.2% if MPERS were to keep the existing asset allocation intact, versus an actuarial assumed rate of 8.25%.



# Investment Activity Overview

To help bridge the gap of expectations versus assumptions, the board approved a new 10% allocation to private equity. The asset class offers the unique ability to generate substantial excess return for the overall portfolio. Within the fixed income allocation, the board approved the use of absolute return techniques to enhance returns. Yields in the fixed income markets remain near historic lows, with annual total returns projected around four percent.

We were fortunate to see that several moves throughout the year provided an immediate positive impact to performance in FY05, particularly within the international equity and real estate allocations. The board increased the target allocation to international equities from 20% to 22.5%. Exposure to securities denominated in foreign currencies provides protection against the depreciation of the U.S. Dollar and offers diversification to the overall equity portfolio. Given that international equities were the top-performing asset class in FY05, delivering a return of 18.8%, the increased allocation helped improve the overall performance of the fund.

The board also increased the target allocation to real estate from 5% to 10%. MPERS made its' initial investment in April of 2004, and continues to review additional managers and structures within the asset class. Real estate continues to offer an attractive income spread over traditional fixed income securities. Together with a strong year of capital appreciation, the real estate portfolio delivered a return of 15.1% in FY05. As was the case with international equities, we were very fortunate on the timing of this transition, as real estate was the second-best performing asset class in FY05.

We saw mixed results in terms of relative performance within the traditional asset classes of domestic equity and fixed income. The domestic equity portfolio returned 10.17% in FY05, exceeding the Russell 3000 benchmark return of 8.05%. An overweight to small and mid cap stocks, along with strong individual manager returns within the large cap sector was the primary source of excess return. The composite fixed income portfolio returned 6.2%, versus the Lehman Universal benchmark return of 7.42%. As part of the asset / liability study, the board approved the use of absolute return strategies to enhance the return of the fixed income sector. We are confident the expanded flexibility within the asset class will lead to improved performance within the sector in the future.

At the end of fiscal year 2005, the revised asset allocation targets were 45% public equity (22.5% Domestic and 22.5% International), 32% public debt (including 16% traditional fixed income and 16% absolute return strategies), 10% real estate, 3% timber and the new 10% allocation to private equity. No allocations to private equity were made as of fiscal year-end, as we continue to evaluate potential structures and advisors to assist with the construction of the portfolio. The chart below lists the target and actual allocations to the various sub-asset classes within the overall portfolio.

Asset Class	Ending FY04 Allocation	FY05 Target Allocation	Ending FY05 Allocation
<b>Public Equity</b>	<b>63.76%</b>	<b>45.00%</b>	<b>54.60%</b>
Domestic equity	43.43%	22.50%	28.50%
International equity	20.33%	22.50%	26.10%
<b>Private Equity</b>	<b>0.00%</b>	<b>10.00%</b>	<b>0.00%</b>
<b>Fixed Income</b>	<b>28.81%</b>	<b>32.00%</b>	<b>30.90%</b>
<b>Real Estate</b>	<b>3.81%</b>	<b>10.00%</b>	<b>11.40%</b>
<b>Timber</b>	<b>3.04%</b>	<b>3.00%</b>	<b>1.90%</b>
<b>Cash</b>	<b>0.58%</b>	<b>0.0%</b>	<b>1.20%</b>

# Investment Summary

For the Years Ended June 30, 2005 and 2004

## Amounts Reported By Management-Type Allocation (In Thousands of Dollars)

	06/30/04			06/30/05			% of Market
	Book Value	Market Value	Acquisitions	Book Value	Market Value	Dispositions	
Domestic Equity	\$ 515,664	\$ 586,116	\$ 230,301	\$ 352,573	\$ 409,565	\$ (393,392)	28.5%
International Equity	267,930	274,388	360,307	342,970	374,325	(285,267)	26.1%
Real Estate	50,004	51,376	97,665	146,464	162,915	(1,205)	11.4%
Timber	28,744	41,064	0	20,494	27,916	(8,250)	1.9%
Fixed Income	386,291	388,751	930,561	433,864	443,729	(882,988)	30.9%
Short Term	7,838	7,837	8,597	17,526	17,512	1,091	1.2%
Total Investments	\$1,256,471	\$1,349,532	\$1,627,431	\$1,313,891	\$1,435,962	\$(1,570,011)	100.0%

### Reconciliation to Statement of Plan Net Assets:

Less Accrued Investment Interest and Income	(3,022)
Less Investment Sales Receivable	(23,614)
Plus Investment Purchases Payable	7,231
Currency Adjustment	59
	<u>\$1,416,616</u>

# *Largest Investment Holdings*

## **Largest Equity Securities (Non-Commingled Funds)**

<b>Shares</b>	<b>Security</b>	<b>Market Value</b>
236,000	LUKOIL OIL COMPANY	\$8,687,160
1,275,000	MITSUMI O.S.K.LINES	7,881,735
497,300	SABMILLER PLC	7,768,424
496,500	HBOS	7,658,032
179,933	CREDIT SUISSE GRP	7,099,846
1,195,000	KAWASAKI KISEN KAI	7,096,020
337,857	STATOIL ASA	6,898,943
1,639,865	SABANCI HOLDINGS TRY1	6,507,888
87,638	CONTINENTAL AG	6,322,436
376,400	AUST & NZ BANK GRP	6,240,312

## **Largest Fixed Income Securities (Non-Commingled Funds)**

<b>Par Value</b>	<b>Security</b>	<b>Market Value</b>
\$11,126,313	CF PYRAMID MBS PT FD	\$11,838,063
8,200,000	UNITED STATES TREAS NTS DTD 00078 3% DUE 12-31-2006	8,124,724
2,120,000	US TREAS BDS DTD 02/15/1996 6 DUE 02-15-2026	2,612,071
2,450,000	FHLMC MULTICLASS SER 2778 CL JD 5 DUE 12-15-2032	2,471,082
1,615,000	CMO WAMU MTG PASS-THRU CTF 2004-AR4 MTGPASSTHRU CTF CLA-6 VAR 02-25-2034	1,589,124
1,550,000	FHLMC MULTICLASS PREASSIGN 00540 5 DUE 04-15-2033	1,553,608
1,380,000	MIZUHO FINL GROUP CAYMAN LTD 8.375 DUE 12-29-2049	1,515,130
1,415,000	FHLMC MULTICLASS PREASSIGN 00485 5 DUE 12-15-2032	1,416,825
1,315,000	TIME WARNER COS INC DEB 8.18% DUE 08-15-2007	1,414,636
1,215,000	PVTPL PEDERNALES ELEC COOP INC 1ST MTG BD 2002 SERA 144A 6.202 11-15-2032	1,409,291

Space and cost restrictions make it impractical to print the entire investment portfolio in this report. However, a portfolio listing is available for review in the office of the Executive Director of MPERS.

# Schedule of Investment Expenses

Fees Accrued  
During FY05

Market Value of Assets  
Under Management at 6/30/05

## MANAGEMENT FEES

Domestic Equity:

Artisan Partners

Barclays Global Investors

Intech

Rothschild Asset Management

The Northern Trust Company\*

International Equity:

Acadian Asset Management

Julius Baer Investment Management

Silchester International Investors

Fixed Income:

Blackrock, Inc.

Deutsche Asset Management

Rockwood Capital Advisors\*

UHB Investment Advisors\*\*

Western Asset Management Co.

Absolute Return:

AQR

Barclays Global Investors

Bridgewater Associates

GMO

Real Estate:

ING Clarion

Och-Ziff Real Estate

Principal Global Investors

Urdang

Timberland:

RMK Timberland

Cash:

The Northern Trust Company

Total Management Fees

\$ 1,435,962,316

\$ 7,584,752

## OTHER INVESTMENT EXPENSES

Custody

Performance Management

General Consulting

Other

Total Other Investment Expenses

\$ 683,551

\$ 8,268,303

## SECURITIES LENDING EXPENSES

Borrower Rebates

Agent Fees

Total Securities Lending Expenses

\$ 3,286,414

\* Investment agreements were terminated during the fiscal year.  
\*\* Investment agreement was terminated. Amount under management represents recoverable taxes.

## *Schedule of Brokerage Commissions*

<b>Brokerage Firm</b>	<b>Total Commission</b>	<b>Number of Shares</b>	<b>Commission Rate</b>
ABN AMRO	\$ 88,817	6,183,814	\$ 0.0144
MORGAN STANLEY	78,761	18,186,068	0.0043
LEHMAN BROTHERS	65,880	8,056,848	0.0082
CITIGROUP GLOBAL	54,447	755,281,582	0.0001
CREDIT SUISSE FIRST BOSTON	52,447	13,092,538	0.0040
MERRILL LYNCH	48,812	86,197,245	0.0006
GOLDMAN SACHS	43,921	2,795,539	0.0157
NORTHERN TRUST	43,173	981,600	0.0440
INSTINET	40,506	10,912,134	0.0037
DEUTSCHE BANK	37,100	1,750,701	0.0212
UBS/WARBURG	33,005	2,710,759	0.0122
JEFFRIES & CO	31,708	1,663,153	0.0191
CRED LYONN SEC	21,961	307,822,913	0.0001
BROCKHOUSE & COOPER	19,652	1,417,791	0.0139
B TRADE SERVICES	13,285	881,650	0.0151
ROBERT W. BAIRD & COMPANY INC	11,732	235,300	0.0499
MERRILL LYNCH PIERCE FENNER & SMITH	11,111	285,500	0.0389
BNY ESI SECURITIES CO	10,993	613,550	0.0179
BEAR STEARNS	10,985	261,928	0.0419
BANC AMERICA	10,694	238,900	0.0448
CHEUVREUX DE VIRIEU	10,298	627,726	0.0164
ROSENBLATT SECURITIES	10,096	504,800	0.0200
J.P. MORGAN SECURITIES	9,857	199,400	0.0494
UBS	9,582	2,942,566	0.0033
WAVE SECURITIES	9,286	464,300	0.0200
MERRILL LYNCH FENNER & SMITH INC	9,041	11,016,849	0.0008
JP MORGAN SECURITIES	8,627	246,344	0.0350
WEEDEN AND & CO	8,600	430,000	0.0200
WACHOVIA CAPITAL MARKETS	7,985	160,200	0.0498
SOCIETE GENERALE	7,951	211,283	0.0376
CAP INSTITUTIONAL SERVICES INC	7,479	373,974	0.0200
LYNCH JONES & RYAN	6,993	155,400	0.0450
LIQUIDNET INC	6,548	327,400	0.0200
PERSHING	6,398	145,413	0.0440
SVENSKA HANDELSBANK	5,968	189,336	0.0315
CANTOR FITZGERALD & CO	5,828	276,311	0.0211
SANFORD C.BERNSTEIN LTD	5,479	162,600	0.0337
CARNEGIE INC	5,191	178,354	0.0291
A.G. EDWARDS	5,174	103,480	0.0500
OTHERS (128 firms less than \$5,000 each)	145,644	5,171,164	0.0282
<b>TOTAL</b>	<b>\$1,021,014</b>	<b>1,243,456,413</b>	
<b>AVERAGE COMMISSION RATE</b>			<b>\$ 0.0008</b>

Broker commissions rebated to MPERS during the fiscal year amounted to \$30,214.

Soft dollar expenditures (excess commissions) used by managers for research services, analysis, and technology amounted to \$80,970.





# *Actuarial Section*

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# Actuary's Certification Letter



**GABRIEL, ROEDER, SMITH & COMPANY**  
Consultants & Actuaries

One Towne Square • Suite 800 • Southfield, Michigan 48076 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

The Retirement Board  
Missouri Department of Transportation  
and Highway Patrol Employees' Retirement System  
P.O. Box 1930  
Jefferson City, Missouri 65102-1930

October 27, 2005

Dear Board Members:

The basic financial objective of the Missouri Department of Transportation and Highway Patrol Employees' Retirement System (MPERS) is to establish and receive contributions which;

- (1) when expressed in terms of percents of active member payroll, will remain approximately level from generation to generation of Missouri citizens, and which
- (2) when combined with present assets and future investment return, will be sufficient to meet the present and future financial obligations of MPERS.

In order to measure progress toward this fundamental objective, MPERS has annual actuarial valuations performed. The valuations (i) measure present financial position, and (ii) establish contribution rates that provide for the current cost and level percent-of-payroll amortization of unfunded actuarial accrued liabilities over a reasonable period. An actuarial valuation was performed based upon benefit conditions, data and assumptions as of June 30, 2005. This valuation indicates that contribution rates for the period beginning July 1, 2006 that are at least equal to the calculated contribution rates will meet the Board's financial objective. The calculated contribution rates are 30.60% of payroll for the 8,117 Non-Uniformed employees and 43.78% of payroll for the 1,076 Uniformed Patrol employees.

The actuarial valuations are based upon financial and participant data which is prepared by retirement system staff, assumptions regarding future rates of investment return and inflation, and rates of retirement, turnover, death, and disability among MPERS' members and their beneficiaries. We review the data for internal and year-to-year consistency as well as general reasonableness prior to its use in the actuarial valuations. It is also summarized and tabulated for the purpose of analyzing trends. The assumptions were adopted by the Board of Trustees and were based upon actual experience of MPERS during the period July 1, 1999 to June 30, 2004. Assets were valued using a three-year smoothing method. The assumptions and methods utilized in this valuation, in our opinion, meet the parameters established by Governmental Accounting Standards Board Statement No. 25.

The current benefit structure is summarized in this section. We provided the information used in the supporting schedules in the actuarial section and the Schedules of Funding Progress in the financial section, as well as the employer contribution rates shown in the Schedule of Employer Contributions in the financial section.

Based upon the valuation results, it is our opinion that the Missouri Department of Transportation and Highway Patrol Employees' Retirement System continues to be in sound condition in accordance with actuarial principles of level percent-of-payroll financing. Over the past few years, the funded status has dropped, largely due to continuing effects of weak 2000-2002 investment markets. If the funding status continues to fall, an increase in the contribution rate above current levels may be necessary.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brian B. Murphy'.

Brian B. Murphy, F.S.A.  
Senior Consultant & Actuary

A handwritten signature in black ink, appearing to read 'Kenneth G. Alberts'.

Kenneth G. Alberts  
Consultant



*Actuarial Section*

# Summary of Actuarial Methods and Assumptions

## Summary of Actuarial Assumptions and Methods

Valuation Date .....	June 30, 2005
Actuarial Cost Method .....	Entry Age
Amortized Method .....	Level percent of payroll
Remaining Amortization Period .....	30 years from July 1, 2006
Asset Valuation Method .....	3-year smoothing
Actuarial Assumptions:	
Investment Rate of Return .....	8.25%
Projected Salary Increase .....	3.75% to 11.75%
Cost-of-Living Adjustments .....	2.6% Compound
Includes Wage Inflation at .....	3.75%

An actuarial valuation is based upon an actuarial cost method, an asset valuation method, and actuarial assumptions. These methods and assumptions are chosen by the Board of Trustees after consultation with the Actuary and other advisors.

The actuarial cost method is called the Entry Age Actuarial Cost Method. This method is consistent with the Board's level percent of payroll funding objective. With this method, the level percent of payroll is determined that will fund a member's retirement benefit over the member's entire working lifetime, from date of hire (Entry Age) to date of exit from the active member population. Differences in the past between assumed and actual experience become part of unfunded actuarial accrued liabilities and are amortized with level percent of payroll contributions. This cost method was first used in the **June 30, 1999** valuation.

The asset valuation method is a three year smoothed market value method in which assumed investment return is recognized immediately each year and differences between actual and assumed investment return are phased in over a closed three year period. This asset valuation method is intended to give recognition to the long term accuracy of market values while filtering out and dampening short term market swings. This method was first used in the **June 30, 1999** valuation.

The actuarial assumptions used in producing the valuation fall into two broad classes: economic assumptions, and demographic assumptions. Economic assumptions refer to long term rates of investment return, wage growth, covered population growth, and inflation. Demographic assumptions refer to retirement rates, turnover rates, disability rates, merit and seniority pay increases, and mortality rates. The current assumptions are based upon a 1999-2004 study of experience of the MPERS. The assumptions are reviewed from time to time to keep them reasonably current with expected experience.

### **Economic Assumptions**

**The investment return rate** used in making the valuation was 8.25% per year, compounded annually (net after administrative expenses). This rate of return is not the assumed real rate of return. The real rate of return over wage inflation is defined to be the portion of investment return which is more than the wage inflation rate. Considering wage inflation recognition of 3.75%, the 8.25% rate translates to an assumed real rate of return of 4.5%. This rate was first used for the **June 30, 2005** valuation.

# *Summary of Actuarial Methods and Assumptions*

**Pay increase assumptions** for individual active members are shown on page 62. Part of the assumption for each age is for a merit and/or seniority increase, and the other 3.75% recognizes wage inflation. These rates were first used for the **June 30, 2005** valuation.

**Price Inflation** is assumed to be 3.25%. This results in a 2.6% annual COLA assumption. It is assumed that the 2.6% COLA will always be paid.

The Active Member Group size is assumed to remain constant at its present level.

**Total active member payroll** is assumed to increase 3.75% a year, which is the portion of the individual pay increase assumptions attributable to wage inflation. This rate was first used for the **June 30, 2005** valuation.

## **Non Economic Assumptions**

**The mortality table** used to measure retired life mortality was the 1971 Group Annuity Mortality Tables projected to the year 2000 set back 1 year for males and 7 years for females. Related values are shown on page 62. This table was first used for the June 30, 2000 valuation. Disabled pension mortality was based on PBGC Disabled Mortality tables.

**The probabilities of retirement** for members eligible to retire are shown on page 63. The rates for full retirement were first used in the **June 30, 2005** valuation. The rates for reduced retirement were first used in the **June 30, 2005** valuation.

**The probabilities of withdrawal** from service, **death in service** and **disability** are shown for sample ages on pages 61 and 63. The withdrawal and disability rates were first used in the **June 30, 2005** valuation. The death-in service rates were first used in the **June 30, 2005** valuation.

**The data about persons now covered and about present assets** was furnished by the System's administrative staff. Although examined for general reasonableness, the data was not audited by the Actuary.

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The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (M.A.A.A.).



# Summary of Actuarial Methods and Assumptions

## Probabilities of Separation From Active Employment Less Than 5 Years of Service

Service	MoDOT, Civilian Patrol & MPERS		Uniformed Patrol	
	Male	Female	Male	Female
0-1	25.00%	18.00%	8.00%	8.00%
1-2	12.00	11.00	6.00	6.00
2-3	7.00	9.00	4.50	4.50
3-4	6.00	7.00	3.00	3.00
4-5	5.00	6.00	2.00	2.00

## Probabilities of Separation From Active Employment More Than 5 Years of Service

Age	MoDOT, Civilian Patrol & MPERS		Uniformed Patrol	
	Male	Female	Male	Female
25	4.70%	6.25%	4.50%	4.50%
30	3.78	5.55	3.78	3.78
35	2.86	4.82	2.22	2.22
40	1.96	3.78	1.20	1.20
45	1.30	3.12	0.82	0.82
50	0.98	3.00	0.46	0.46
55	0.66	1.50	0.18	0.18
60	0.21	0.50	0.10	0.10

# Summary of Actuarial Methods and Assumptions

## Salary Increase Assumptions For an Individual Member

### Age Based Salary Scale

Age	MoDOT, Civilian Patrol & MPERS			Uniformed Patrol		
	Merit & Seniority	Base (Economic)	Increase Next Year	Merit & Seniority	Base (Economic)	Increase Next Year
20	8.00%	3.75%	11.75%	6.00%	3.75%	9.75%
25	5.66	3.75	9.41	5.40	3.75	9.15
30	3.30	3.75	7.05	3.50	3.75	7.25
35	2.05	3.75	5.80	1.75	3.75	5.50
40	1.45	3.75	5.20	1.10	3.75	4.85
45	0.95	3.75	4.70	0.64	3.75	4.39
50	0.60	3.75	4.35	0.37	3.75	4.12
55	0.38	3.75	4.13	0.29	3.75	4.04
60	0.30	3.75	4.05	0.00	3.75	3.75

## Joint Life Retirement Values (8.25% Interest)

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$180	\$185	29.17	34.67
55	170	175	24.82	30.06
60	158	163	20.70	25.67
65	143	149	16.82	21.50
70	127	132	13.32	17.57
75	110	115	10.36	13.99
80	92	97	7.83	10.91

The present values shown above are for illustrative purposes only and include the value of a 50% survivor benefit and an estimate of the value of the post retirement increase provision. The factors assume that males are 3 years older than their spouses and that post retirement increases will be 2.6% per year payable in October, with the first increase being 9 months after retirement.



# Summary of Actuarial Methods and Assumptions

## Percent of Eligible Active Members Retiring Next Year (Rates of Retirement)

Age	MoDOT, Civilian Patrol & MPERS				Uniformed Patrol	
	Male		Female		Male	Female
	Normal	Early	Normal	Early	Normal	
50	18.0%	0.0%	18.0%	0.0%	50.0%	50.0%
55	18.0	4.0	18.0	4.0	25.0	25.0
60	18.0	4.0	20.0	4.0	100.0	100.0
65	45.0	0.0	40.0	0.0	100.0	100.0
70	100.0	0.0	100.0	0.0	100.0	100.0

## Percent of Members Becoming Disabled at the Indicated Age (Rates of Disability)

Age	MoDOT, Civilian Patrol & MPERS		Uniformed Patrol	
	Male	Female	Male	Female
25	0.01%	0.06%	0.03%	0.03%
30	0.01	0.07	0.03	0.03
35	0.06	0.01	0.04	0.04
40	0.09	0.16	0.06	0.06
45	0.21	0.29	0.09	0.09
50	0.36	0.45	0.15	0.15
55	0.66	0.54	0.00	0.00
60+	0.00	0.00	0.00	0.00



## *Summary of Member Data Included In Valuations*

	Non-Uniformed			Uniformed Patrol	Grand Total
	Civilian Patrol	MoDOT & MPERS	Non-Uniformed Total		
<b>Active Members</b>					
Closed Plan	812	5,508	6,320	895	7,215
Year 2000 Plan	304	1,493	1,797	181	1,978
Total Active Members	1,116	7,001	8,117	1,076	9,193
<b>Retired Members &amp; Survivors</b>					
Closed Plan	398	3,954	4,352	718	5,070
Year 2000 Plan	211	1,391	1,602	1	1,603
Total Regular Pensioners	609	5,345	5,954	719	6,673
<b>Disability Recipients</b>	10	133	143	6	149
<b>Fully Insured Disability Recipients</b>	0	7	7	0	7
<b>Terminated Vested Members</b>	183	1,033	1,216	141	1,357
<b>Total</b>	<b>1,918</b>	<b>13,519</b>	<b>15,437</b>	<b>1,942</b>	<b>17,379</b>
Active Member Valuation Payroll	\$35,727,675	\$258,019,271	\$293,746,946	\$ 51,948,921	\$ 345,695,867
Unfunded Actuarial Accrued Liability	N/A	N/A	\$940,955,041	\$269,105,002	\$1,210,060,043



# Active Members By Attained Age and Years of Service

## MoDOT and MPERS

### Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	20							20	\$ 462,152
20-24	148	13						161	5,115,429
25-29	95	206	3					304	11,041,499
30-34	104	301	172	5				582	21,533,450
35-39	78	235	310	121	17			761	28,969,350
40-44	80	253	203	266	221	12		1,035	41,006,746
45-49	82	166	187	195	225	279	22	1,156	46,023,250
50-54	55	121	131	129	137	169	108	850	33,816,297
55-59	28	69	79	84	67	50	86	463	18,675,770
60-64	13	28	17	31	21	10	28	148	5,884,284
65-69	6		7	3	1	1	4	22	1,024,515
70 +		2	2		1	1	0	6	214,014
<b>Totals</b>	<b>709</b>	<b>1,394</b>	<b>1,111</b>	<b>834</b>	<b>690</b>	<b>522</b>	<b>248</b>	<b>5,508</b>	<b>\$213,766,756</b>

Average Age 43.8 years  
 Average Service 13.8 years  
 Average Pay \$38,810

### Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20	2							2	\$ 33,526
20-24	166							166	4,686,291
25-29	328							328	10,907,744
30-34	268							268	7,796,295
35-39	202							202	5,786,966
40-44	221							221	6,123,935
45-49	136							136	3,834,917
50-54	98							98	2,919,187
55-59	49							49	1,402,521
60-64	20							20	698,091
65-69	3							3	63,042
70 +									0
<b>Totals</b>	<b>1,493</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,493</b>	<b>\$44,252,515</b>

Average Age 36.4 years  
 Average Service 2.7 years  
 Average Pay \$29,640

# Active Members By Attained Age and Years of Service

## Uniformed Patrol

### Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20									\$ 0
20-24	21							21	42,106
25-29	5	42						47	1,764,824
30-34	6	127	49					182	7,832,605
35-39	1	78	133	30				242	11,403,500
40-44		19	36	90	19			164	8,633,442
45-49		5	3	36	31	44	3	122	7,323,185
50-54				5	10	42	34	91	6,237,673
55-59					2	2	21	25	1,867,569
60-64							1	1	72,410
65-69									0
70 +									0
<b>Totals</b>	<b>33</b>	<b>271</b>	<b>221</b>	<b>161</b>	<b>62</b>	<b>88</b>	<b>59</b>	<b>895</b>	<b>\$45,177,314</b>

Average Age 40.0 years  
 Average Service 15.0 years  
 Average Pay \$50,477

### Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20									\$ 0
20-24	32							32	1,116,940
25-29	94							94	3,545,001
30-34	39							39	1,506,900
35-39	10							10	381,883
40-44	4							4	141,856
45-49	1							1	39,140
50-54	1							1	39,887
55-59									0
60-64									0
65-69									0
70 +									0
<b>Totals</b>	<b>181</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>181</b>	<b>\$ 6,771,607</b>

Average Age 28.9 years  
 Average Service 2.7 years  
 Average Pay \$37,412



# Active Members By Attained Age and Years of Service

## Civilian Patrol

### Closed Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20								0	\$ 0
20-24	9							9	160,221
25-29	5	28	1					34	930,693
30-34	6	42	19					67	2,076,509
35-39	5	46	34	22	2			109	3,540,140
40-44	3	31	38	29	31	2		134	4,547,792
45-49	4	31	21	38	34	41	8	177	6,380,135
50-54		26	21	28	21	27	27	150	5,639,813
55-59	2	16	15	24	16	13	14	100	3,405,501
60-64		6	8	6	4	1	1	26	801,295
65-69				2	1		1	4	128,857
70 +				1			1	2	60,343
<b>Totals</b>	<b>34</b>	<b>226</b>	<b>157</b>	<b>150</b>	<b>109</b>	<b>84</b>	<b>52</b>	<b>812</b>	<b>\$27,671,299</b>

Average Age 45.8 years  
 Average Service 15.5 years  
 Average Pay \$34,078

### Year 2000 Plan

Attained Age	Counted by Complete Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30+	No.	Valuation Payroll
Under 20									\$ 0
20-24	45							45	1,076,079
25-29	63							63	1,681,038
30-34	43							43	1,231,249
35-39	34							34	933,496
40-44	38							38	1,034,938
45-49	24							24	602,760
50-54	27							27	718,350
55-59	21							21	569,652
60-64	8							8	188,982
65-69	1							1	19,832
70 +									0
<b>Totals</b>	<b>304</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>304</b>	<b>\$ 8,056,376</b>

Average Age 37.4 years  
 Average Service 2.6 years  
 Average Pay \$26,501

## *Schedule of Participating Employers*

	<b>MoDOT</b>		<b>Patrol</b>		<b>MPERS</b>		<b>Total</b>	
	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>
1996	6,933	76.84	2,087	23.13	3	0.03	9,023	100
1997	6,831	75.97	2,157	24.00	3	0.03	8,991	100
1998	6,633	74.96	2,212	25.00	4	0.04	8,849	100
1999	6,952	75.95	2,198	24.02	3	0.03	9,153	100
2000	7,008	76.33	2,170	23.63	4	0.04	9,182	100
2001	6,969	76.53	2,133	23.43	4	0.04	9,106	100
2002	6,590	75.70	2,106	24.19	10	0.11	8,706	100
2003	6,716	75.50	2,169	24.39	10	0.11	8,895	100
2004	6,848	76.07	2,143	23.81	11	0.12	9,002	100
2005	6,980	76.15	2,174	23.72	12	0.13	9,166	100

## *Schedule of Active Member Valuation Data*

<b>Actuarial Valuation Date</b>	<b>Number of Active Members</b>	<b>Annualized Payroll</b>	<b>Average Pay</b>	<b>Percent Change in Average Pay from Prior Year</b>
06/30/1996	9,023	\$264,196,115	\$29,280	4.1%
06/30/1997	8,997	280,209,116	31,145	6.4
06/30/1998	8,871	284,889,796	32,115	3.1
06/30/1999	9,140	298,673,247	32,678	1.8
06/30/2000	9,171	312,532,009	34,078	4.3
06/30/2001	9,087	327,049,257	35,991	5.6
06/30/2002	8,695	312,747,492	35,969	(0.1)
06/30/2003	8,892	318,744,192	35,846	(0.3)
06/30/2004	9,002	328,210,887	36,460	1.7
06/30/2005	9,193	345,695,867	37,604	3.1
Ten Year Average				2.9%



# Solvency Test

The MPERS funding objective is to meet long term benefit promises through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the System are level in concept and soundly executed, the System will **pay all promised benefits when due -- the ultimate test of financial soundness**. Testing for level contribution rates is **the** long term test.

A **solvency test** is one means of checking a system's progress under its funding program. In a solvency test for a non-contributory plan, the plan's present assets (cash and investments) are compared with: 1) The liabilities for future benefits to present retired lives and 2) The liabilities for service already rendered by members. In a system that has been following the discipline of level percent of payroll financing, the liabilities for future benefits to present retired lives (liability 1) will be fully covered by present assets (except in rare circumstances). In addition, the liabilities for service already rendered by members (liability 2) will be partially covered by the remainder of present assets. The larger the funded portion of liability 2, the stronger the condition of the system.

The schedule below illustrates the history of liability 2 of the System. Progress on solvency has been negatively impacted by the 2000-2002 investment market.

Valuation Date	(1) Retirees and Beneficiaries	(2) Active and Inactive Members	Present Valuation Assets	Portion of Present Values Covered by Present Assets		
June 30	(Millions)	(Millions)	(Millions)	(1)	(2)	Total
1999	\$1,132	\$921	\$1,243	100%	12%	61%
2000	1,238	951	1,423	100%	19%	65%
2001	1,375	926	1,521	100%	16%	66%
2002 *	1,470	888	1,451	99%	0%	62%
2003	1,555	863	1,364	88%	0%	56%
2004	1,626	867	1,332	82%	0%	53%
2005 *	1,669	958	1,417	85%	0%	54%

\* New assumptions adopted

# Derivation of Financial Experience

Actual experience will never equal the assumptions, except by coincidence. Gains and losses may offset each other over a period of years, but sizeable year-to-year variations from assumed experience are common. Detail on the derivation of the experience gain (loss) is shown below.

	<u>(Millions)</u>
UAAL Beginning of Year (at July 1)	\$1,161.3
Asset Method Change	(21.6)
UAAL After Asset Method Change	1,139.7
Normal Cost	40.5
Contributions	(102.6)
Disbursements	0.0
Interest	91.4
Net Change in LTD Assets	(0.1)
Expected UAAL Before Any Changes	1,168.9
Effect of Changes in Assumptions & Methods	3.5
Expected UAAL After Changes	1,172.4
End of Year UAAL (at June 30)	1,210.1
Loss for Year	\$ (37.7)
Loss as a percent of actuarial accrued liabilities at start of year (\$2,492.9 million)	(1.5)%

Valuation Date	Experience Gain (Loss)
June 30	as % of Beginning Accrued Liability
1999	(7.7)%
2000	(0.1)%
2001	(9.3)%
2002	(4.5)%
2003	(5.2)%
2004	(2.9)%
2005	(1.5)%





# *Schedule of Retirees and Beneficiaries Added and Removed*

Year Ended	Added to Rolls		Removed from Rolls		Rolls End of Year		Average Annual Allowances	% Increase	
	Number	Annual Allowances	Number	Annual Allowances	Number	Annual Allowances		in Annual Allowance	in Average Annual Allowance
6/30/2005									
Retirees	202	\$ 4,685,700	125	\$2,373,810	4,920	\$127,508,904	\$25,916	3.53%	1.91%
Beneficiaries	106	1,527,938	79	618,487	1,762	19,251,121	10,926	7.95%	6.29%
Disabilities	7	95,296	7	47,561	153	1,474,983	9,640	(1.86)%	(1.86)%
6/30/2004									
Retirees	295	\$ 7,389,209	143	\$2,239,625	4,843	\$123,159,002	\$25,430	5.95%	2.62%
Beneficiaries	114	1,423,712	89	557,685	1,735	17,833,685	10,279	7.64%	6.08%
Disabilities	9	87,586	11	36,938	153	1,502,868	9,823	(19.77)%	(18.72)%
6/30/2003									
Retirees	249	\$ 6,319,872	101	\$2,062,469	4,691	\$116,243,532	\$24,780	6.24%	2.89%
Beneficiaries	121	1,627,820	91	650,474	1,710	16,568,589	9,689	9.58%	7.66%
Disabilities	20	180,624	22	43,088	155	1,873,102	12,085	36.86%	38.62%
6/30/2002									
Retirees	303	\$ 8,089,425	134	\$2,193,413	4,543	\$109,416,172	\$24,085	7.59%	3.59%
Beneficiaries	119	1,768,570	76	369,662	1,680	15,120,376	9,000	11.53%	8.68%
Disabilities	17	168,853	41	180,231	157	1,368,640	8,717	(11.88)%	1.59%
6/30/2001									
Retirees	531	\$ 13,546,408	111	\$1,630,433	4,374	\$101,693,353	\$23,250	21.66%	9.97%
Beneficiaries	108	1,447,292	112	412,086	1,637	13,556,769	8,281	10.62%	10.89%
Disabilities	6	70,722	87	1,001,360	181	1,553,154	8,581	(28.20)%	3.93%
6/30/2000									
Retirees	323	\$ 9,406,709	138	\$1,665,215	3,954	\$ 83,590,958	\$21,141	10.72%	4.62%
Beneficiaries	102	1,255,689	61	257,043	1,641	12,255,372	7,468	10.72%	7.28%
Disabilities	8	107,281	2	13,047	262	2,163,190	8,256	(4.69)%	(0.32)%

# Summary of Plan Provisions\*

## Comparison of the Closed Plan and the Year 2000 Plan For the Year Ended June 30, 2005

Plan Provision	Closed Plan	Year 2000 Plan
<b>Membership Eligibility</b>	Members who work in a position normally requiring at least 1,000 hours of work a year.	Members hired for the first time on or after July 1, 2000, in a position requiring at least 1,000 hours of work a year.  Members who left state employment prior to becoming vested and return to work on or after July 1, 2000, in a position normally requiring at least 1,000 hours of work a year.
<b>Normal Retirement Eligibility</b>	Age 65 & active with 4 years of service. Age 65 with 5 years of service. Age 60 with 15 years of service. "Rule of 80" / minimum age 48. Age 55 with 4 years of service (active uniformed members only). Age 60 - mandatory with 5 years of service (active uniformed members only).	Age 62 with 5 years of service. "Rule of 80" / minimum age 48. Age 60 - mandatory with 5 years of service (active uniformed members only).
<b>Early Retirement Eligibility</b>	Age 55 with 10 years of creditable service.	Age 57 with 5 years creditable service.
<b>Benefit</b> Life Benefit  Temporary Benefit	1.6% x FAP** x service (Base benefit is increased by 33 1/3% for uniformed patrol members only).  Not available.	1.7% x FAP** x service   0.8% x FAP** x service (until age 62 – only if retiring under "Rule of 80").
<b>Vesting</b>	5 years of service.	5 years of service.
<b>COLA</b> (Cost-of-Living Allowance)	If hired before August 28, 1997, annual COLA is a minimum of 4%, maximum 5%, based on 80% of the increase in the CPI-U over the previous year, up to a maximum of 65% of original benefit. After 65% cap is reached, annual COLA increases will be equal to 80% of the change in the CPI-U, with a maximum of 5%. If hired after the above date, annual COLAs will be equal to 80% of the increase in the CPI-U, maximum 5%, with no guaranteed minimum.	Annual COLA is equal to 80% of the change in the CPI-U with a maximum rate of 5%.
<b>Survivor Benefit</b> (Death before retirement) Non duty-Related Death  Duty-Related Death	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children until age 21.  If at least 3, but less than 5, years of service the survivor benefit is calculated using 25% of the member's base benefit calculated as if the member retired on their date of death.  Survivor benefit to eligible spouse or children no less than 50% of final average pay (no service requirement).	Survivor benefit to eligible spouse calculated using the Joint & 100% survivor option or 80% of the member's life income annuity paid to eligible children until age 21.    Survivor benefit to eligible spouse or children no less than 50% of final average pay (no service requirement).
<b>Optional Forms of Payment</b> (Death After Retirement)	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: -Life Income Annuity -Unreduced Joint & 50% Survivor -Joint & 100% Survivor -60 or 120 Guaranteed Payments -BackDROP	Survivor benefit to eligible spouse based on payment option elected at retirement. Payment options include: -Life Income Annuity -Joint & 50% Survivor -Joint & 100% Survivor -120 or 180 Guaranteed Payments -BackDROP
<b>Disability</b>	Long-Term Disability and Work-Related Disability	Long-Term Disability and Work-Related Disability

\* This summary describes the plan provisions of the Revised Statutes of Missouri (RSMo), as amended, that governed the programs, which MPERS administered during the period covered by this report. It does not overrule any applicable statute or administrative rule and, in the event of a conflict, the applicable statute or rule would apply. The Year 2000 Plan was effective July 1, 2000. A complete summary plan description is available at the MPERS office.

\*\* Final Average Pay – highest 36 consecutive months of pay.



# *Legislative Changes*

No legislative changes were made during the 2005 legislative session; however, a significant piece of legislation was the introduction of HB333. This bill would have consolidated MPERS with MOSERS, the retirement system for all other state employees. The Board took the position that MPERS is open to dialogue on the issue of consolidation and other retirement issues.

On August 28, 2005, Governor Matt Blunt established a State Retirement Consolidation Commission per Executive Order 05-22. The commission's task will be to analyze the issues and objectives of the boards responsible for administering benefits, the effect on funding and contribution rates, the effect on investments, and the similarities and differences in retirement plan provisions along with the impact on benefit services and membership. Further, the commission will be charged with ensuring the current benefit structure provides financial security in an equitable and cost-effective manner.

# *Notes*



# *Statistical Section*

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*\* Information, excluding financial data on page 89, was gathered using an internal pension administration system.*

# *Active Member Data*

## **Schedule of Participating Employers**

	<b>MoDOT</b>		<b>Patrol</b>		<b>MPERS</b>		<b>Total</b>	
	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>	<b>Employees</b>	<b>%</b>
1996	6,933	76.84	2,087	23.13	3	0.03	9,023	100
1997	6,831	75.97	2,157	24.00	3	0.03	8,991	100
1998	6,633	74.96	2,212	25.00	4	0.04	8,849	100
1999	6,952	75.95	2,198	24.02	3	0.03	9,153	100
2000	7,008	76.33	2,170	23.63	4	0.04	9,182	100
2001	6,969	76.53	2,133	23.43	4	0.04	9,106	100
2002	6,590	75.70	2,106	24.19	10	0.11	8,703	100
2003	6,716	75.50	2,169	24.39	10	0.11	8,895	100
2004	6,848	76.07	2,143	23.81	11	0.12	9,002	100
2005	6,980	76.15	2,174	23.72	12	0.13	9,166	100

# Active Member Data

For the Years Ended June 30, 2005

## By Age

### Closed Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	55	54	1	-	-
21-25	157	153	3	-	1
26-30	430	333	32	64	1
31-35	909	628	70	209	2
36-40	1,130	805	108	216	1
41-45	1,374	1,079	143	152	-
46-50	1,379	1,084	170	122	3
51-55	980	757	139	83	1
56-60	476	377	85	13	1
61-65	128	112	15	-	1
> 65	29	24	5	-	-
<b>Total</b>	<b>7,047</b>	<b>5,406</b>	<b>771</b>	<b>859</b>	<b>11</b>
<b>Average Age</b>		<b>43</b>	<b>46</b>	<b>40</b>	<b>43</b>

### Year 2000 Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	11	7	3	1	-
21-25	404	271	74	59	-
26-30	471	322	55	94	-
31-35	340	256	48	36	-
36-40	246	196	38	11	1
41-45	268	224	43	1	-
46-50	171	142	27	2	-
51-55	122	96	26	-	-
56-60	63	44	19	-	-
61-65	21	15	6	-	-
> 65	2	1	1	-	-
<b>Total</b>	<b>2,119</b>	<b>1,574</b>	<b>340</b>	<b>204</b>	<b>1</b>
<b>Average Age</b>		<b>36</b>	<b>36</b>	<b>28</b>	<b>40</b>



# Active Member Data

For the Years Ended June 30, 2005

## By Years of Service

### Closed Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 1	671	669	2	-	-
1-5	482	400	44	36	2
6-10	1,719	1,204	230	284	1
11-15	1,376	1,034	132	209	1
16-20	1,176	908	139	127	2
21-25	703	506	116	81	-
26-30	657	494	74	85	4
31-35	208	143	30	35	-
36-40	48	41	4	2	1
41-45	5	5	-	-	-
46 +	2	2	-	-	-
<b>Total</b>	<b>7,047</b>	<b>5,406</b>	<b>771</b>	<b>859</b>	<b>11</b>
<b>Average Service</b>		<b>13</b>	<b>16</b>	<b>15</b>	<b>19</b>

### Year 2000 Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 1	388	261	74	53	-
1-5	1,697	1,285	260	151	1
6-10	29	24	5	-	-
11-15	3	3	-	-	-
16-20	2	1	1	-	-
21-25	-	-	-	-	-
26-30	-	-	-	-	-
31-35	-	-	-	-	-
36-40	-	-	-	-	-
41-45	-	-	-	-	-
46 +	-	-	-	-	-
<b>Total</b>	<b>2,119</b>	<b>1,574</b>	<b>340</b>	<b>204</b>	<b>1</b>
<b>Average Service</b>		<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>

# Terminated Vested Member Data

For the Years Ended June 30, 2005

## By Age

### Closed Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	-	-	-	-	-
21-25	3	3	-	-	-
26-30	23	16	5	2	-
31-35	182	114	20	48	-
36-40	273	204	31	38	-
41-45	316	255	41	20	-
46-50	275	223	33	19	-
51-55	192	144	35	13	-
56-60	100	81	17	2	-
61-65	5	3	2	-	-
> 65	-	-	-	-	-
<b>Total</b>	<b>1,369</b>	<b>1,043</b>	<b>184</b>	<b>142</b>	-
<b>Average Age</b>		<b>44</b>	<b>45</b>	<b>40</b>	-

### Year 2000 Plan

Age	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 21	-	-	-	-	-
21-25	-	-	-	-	-
26-30	-	-	-	-	-
31-35	1	1	-	-	-
36-40	-	-	-	-	-
41-45	-	-	-	-	-
46-50	-	-	-	-	-
51-55	-	-	-	-	-
56-60	-	-	-	-	-
61-65	-	-	-	-	-
> 65	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>1</b>	-	-	-
<b>Average Age</b>		<b>31</b>	-	-	-

# Terminated Vested Member Data

For the Years Ended June 30, 2005

## By Years of Service

### Closed Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 1	-	-	-	-	-
1-5	8	7	-	1	-
6-10	259	175	36	48	-
11-15	446	340	60	46	-
16-20	347	295	36	16	-
21-25	136	98	23	15	-
26-30	96	67	16	13	-
31-35	58	43	13	2	-
36-40	19	18	-	1	-
41-45	-	-	-	-	-
46 +	-	-	-	-	-
<b>Total</b>	<b>1,369</b>	<b>1,043</b>	<b>184</b>	<b>142</b>	-
<b>Average Service</b>		<b>17</b>	<b>17</b>	<b>15</b>	-

### Year 2000 Plan

Years of Service	Total	MoDOT	Civilian Patrol	Uniformed Patrol	MPERS
< 1	-	-	-	-	-
1-5	-	-	-	-	-
6-10	1	1	-	-	-
11-15	-	-	-	-	-
16-20	-	-	-	-	-
21-25	-	-	-	-	-
26-30	-	-	-	-	-
31-35	-	-	-	-	-
36-40	-	-	-	-	-
41-45	-	-	-	-	-
46 +	-	-	-	-	-
<b>Total</b>	<b>1</b>	<b>1</b>	-	-	-
<b>Average Service</b>		<b>7</b>	-	-	-

# Schedule of Retired Members By Type of Benefit

## All Members

Amount of Monthly Benefit	Retirement		Type of Benefit Disability			Survivor	Total Recipients
	Normal	Early	Normal	Work-Related	Long-Term		
1-200	20	17	5	-	3	244	289
201-400	93	86	7	-	23	355	564
401-600	143	61	7	-	22	277	510
601-800	214	40	7	4	12	188	465
801-1000	212	23	4	3	4	149	395
1001-1200	259	7	3	2	2	102	375
1201-1400	276	9	2	8	2	80	377
1401-1600	314	4	-	8	2	59	387
1601-1800	333	5	1	7	-	56	402
1801-2000	316	1	1	1	-	47	366
2001-2200	288	2	-	3	-	35	328
2201-2400	326	-	-	-	-	34	360
2401-2600	289	1	-	2	-	29	321
2601-2800	210	-	-	1	-	23	234
2801-3000	188	-	-	-	-	19	207
> 3000	1,183	-	-	1	-	65	1,249
<b>TOTALS</b>	<b>4,664</b>	<b>256</b>	<b>37</b>	<b>40</b>	<b>70</b>	<b>1,762</b>	<b>6,829 *</b>

## MoDOT

Amount of Monthly Benefit	Retirement		Type of Benefit Disability			Survivor	Total Recipients
	Normal	Early	Normal	Work-Related	Long-Term		
1-200	16	13	5	-	1	226	261
201-400	66	69	7	-	22	329	493
401-600	113	55	7	-	18	256	449
601-800	183	36	7	4	12	164	406
801-1000	177	20	4	3	4	124	332
1001-1200	227	5	3	2	2	82	321
1201-1400	247	8	2	8	2	59	326
1401-1600	283	4	-	8	2	47	344
1601-1800	283	5	1	3	-	41	333
1801-2000	264	1	-	1	-	27	293
2001-2200	250	2	-	3	-	27	282
2201-2400	287	-	-	-	-	23	310
2401-2600	245	1	-	1	-	23	270
2601-2800	181	-	-	-	-	19	200
2801-3000	158	-	-	-	-	17	175
> 3000	642	-	-	-	-	48	690
<b>TOTALS</b>	<b>3,622</b>	<b>219</b>	<b>36</b>	<b>33</b>	<b>63</b>	<b>1512</b>	<b>5,485</b>

\* This number includes two retirement system staff retirees.

# *Schedule of Retired Members By Type of Benefit* (continued)

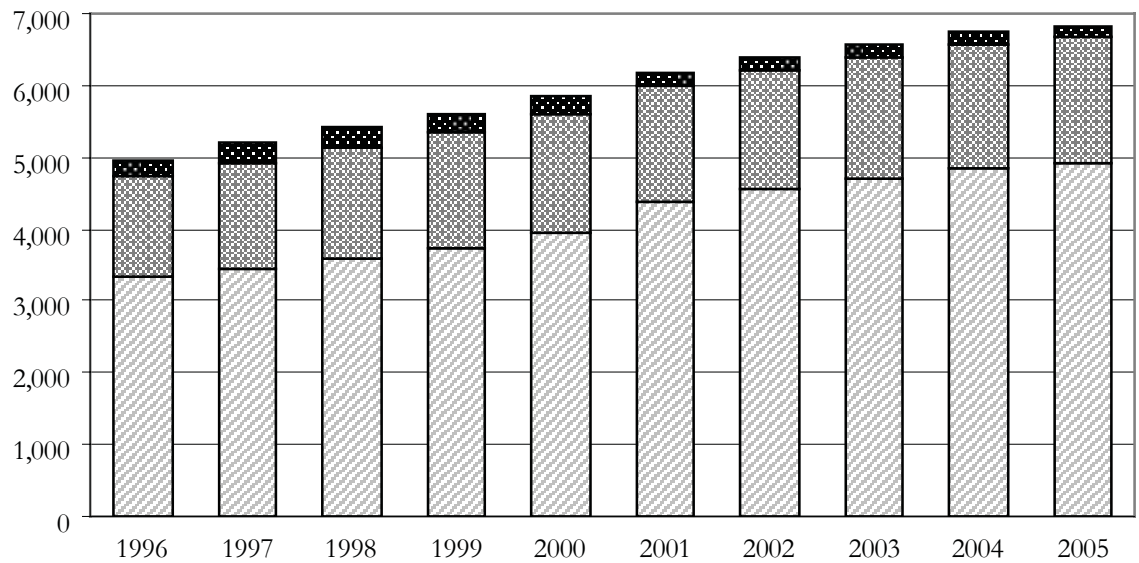
## **Uniformed Patrol**



Amount of Monthly Benefit	Retirement		Type of Benefit			Survivor	Total Recipients
	Normal	Early	Normal	Disability Work-Related	Long-Term		
1-200	-	-	-	-	-	2	2
201-400	4	-	-	-	-	10	14
401-600	9	-	-	-	-	7	16
601-800	4	-	-	-	-	15	19
801-1000	3	-	-	-	-	12	15
1001-1200	1	-	-	-	-	5	6
1201-1400	3	-	-	-	-	12	15
1401-1600	3	-	-	-	-	11	14
1601-1800	4	-	-	2	-	14	20
1801-2000	3	-	1	-	-	18	22
2001-2200	3	-	-	-	-	6	9
2201-2400	3	-	-	-	-	10	13
2401-2600	13	-	-	1	-	6	20
2601-2800	14	-	-	1	-	4	19
2801-3000	18	-	-	-	-	2	20
> 3000	487	-	-	1	-	13	501
<b>TOTALS</b>	<b>572</b>	<b>-</b>	<b>1</b>	<b>5</b>	<b>-</b>	<b>147</b>	<b>725</b>

## **Civilian Patrol**

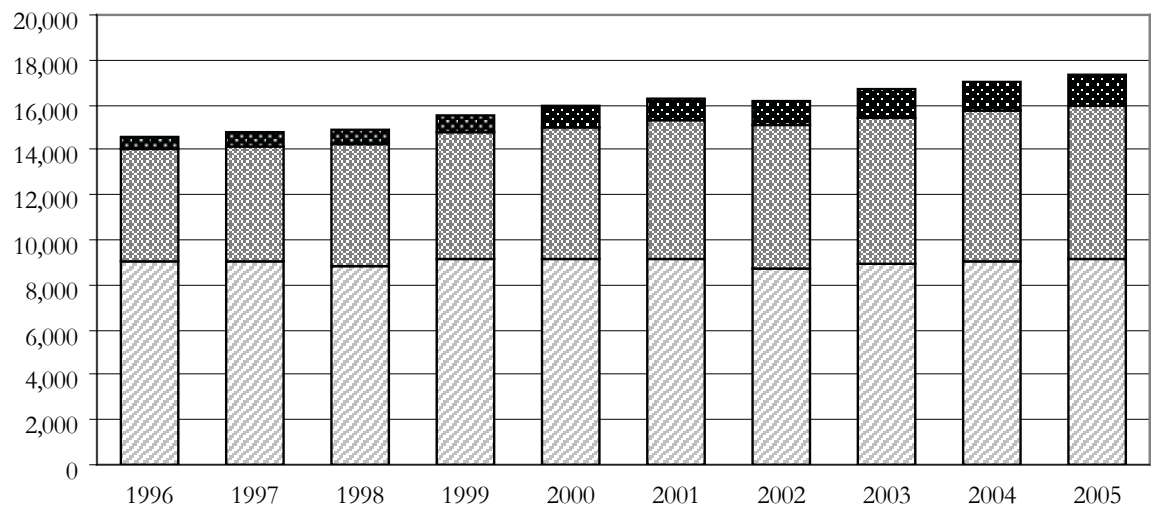
Amount of Monthly Benefit	Retirement		Type of Benefit			Survivor	Total Recipients
	Normal	Early	Normal	Disability Work-Related	Long-Term		
1-200	3	4	-	-	2	16	25
201-400	23	17	-	-	1	16	57
401-600	21	6	-	-	4	14	45
601-800	27	4	-	-	-	9	40
801-1000	32	3	-	-	-	13	48
1001-1200	31	2	-	-	-	15	48
1201-1400	26	1	-	-	-	9	36
1401-1600	28	-	-	-	-	1	29
1601-1800	46	-	-	2	-	1	49
1801-2000	49	-	-	-	-	2	51
2001-2200	35	-	-	-	-	2	37
2201-2400	36	-	-	-	-	1	37
2401-2600	30	-	-	-	-	-	30
2601-2800	15	-	-	-	-	-	15
2801-3000	12	-	-	-	-	-	12
> 3000	54	-	-	-	-	4	58
<b>TOTALS</b>	<b>468</b>	<b>37</b>	<b>0</b>	<b>2</b>	<b>7</b>	<b>103</b>	<b>617</b>



## *Benefit Recipients*



	Disabilities	207	272	275	263	262	181	157	155	153	147
	Survivors	1,405	1,486	1,549	1,590	1,641	1,637	1,680	1,710	1,735	1,762
	Retirees	3,329	3,445	3,585	3,747	3,954	4,374	4,543	4,691	4,843	4,920

## *Membership Distribution*



	Term Vested Members	498	574	660	762	912	1,018	1,130	1,207	1,285	1,370
	Benefit Recipients	5,003	5,203	5,409	5,600	5,857	6,192	6,380	6,556	6,731	6,829
	Active Members	9,023	8,997	8,849	9,172	9,171	9,106	8,706	8,895	9,002	9,166

# Schedule of Average Monthly Benefit Payments

## MoDOT

### By Years of Service

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
2000	Average Benefit	247	497	853	1,049	1,964	2,608	2,763	3,323
	Average FAP	1,629	1,879	2,640	2,352	2,905	3,331	3,624	4,112
	Current Retirees	2	10	14	17	53	70	57	40
2001	Average Benefit	270	444	652	1,303	1,952	2,668	2,942	3,324
	Average FAP	2,318	1,895	1,572	2,519	2,617	3,254	3,721	4,163
	Current Retirees	20	25	27	35	77	155	65	26
2002	Average Benefit	362	537	645	1,242	2,134	2,703	2,823	2,626
	Average FAP	2,216	1,668	2,039	2,250	3,065	3,577	4,123	4,015
	Current Retirees	1	16	14	31	58	65	32	20
2003	Average Benefit	328	439	647	1,177	2,075	2,505	2,828	2,910
	Average FAP	2,122	1,784	1,752	2,620	2,826	3,409	3,803	4,081
	Current Retirees	13	11	12	23	48	40	31	15
2004	Average Benefit	313	552	865	1,352	2,000	2,743	2,534	3,218
	Average FAP	3,034	2,691	2,635	2,613	2,852	3,463	3,506	4,420
	Current Retirees	10	14	19	22	71	60	28	9
2005	Average Benefit	330	393	763	1,354	2,150	2,376	3,087	2,936
	Average FAP	2,885	2,376	2,732	2,782	3,203	3,294	3,979	3,481
	Current Retirees	12	19	21	9	51	22	19	7

FAP = Final Average Pay



# *Schedule of Average Monthly Benefit Payments* (continued)

## Uniformed Patrol

### By Years of Service

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
2000	Average Benefit	0	643	0	1,884	3,839	4,179	4,631	0
	Average FAP	0	1,275	0	3,053	4,792	4,867	4,735	0
	Current Retirees	0	1	0	2	2	15	8	0
2001	Average Benefit	0	506	0	1,202	3,092	4,107	4,714	5,232
	Average FAP	0	801	0	2,718	3,709	4,501	4,273	5,352
	Current Retirees	0	3	0	1	6	11	5	1
2002	Average Benefit	0	646	1,539	2,953	3,484	4,109	4,498	5,825
	Average FAP	0	2,564	0	4,566	4,739	4,928	5,373	5,624
	Current Retirees	0	1	1	1	9	12	10	1
2003	Average Benefit	338	438	0	0	3,127	3,940	4,058	0
	Average FAP	2,876	1,514	0	0	4,363	5,112	4,982	0
	Current Retirees	2	1	0	0	12	7	8	0
2004	Average Benefit	523	364	1,326	0	2,928	3,579	3,972	4,420
	Average FAP	2,295	992	3,000	0	4,407	4,901	5,171	5,078
	Current Retirees	1	1	1	0	8	9	6	1
2005	Average Benefit	0	558	1,140	2,260	3,030	3,241	4,470	4,762
	Average FAP	0	2,386	2,772	3,870	3,923	4,793	5,362	5,158
	Current Retirees	0	2	1	2	5	6	4	1

FAP = Final Average Pay

# *Schedule of Average Monthly Benefit Payments* (continued)

## **Civilian Patrol**

### **By Years of Service**

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
<b>2000</b>	<b>Average Benefit</b>	<b>277</b>	<b>571</b>	<b>701</b>	<b>1,145</b>	<b>1,827</b>	<b>2,427</b>	<b>2,782</b>	<b>2,217</b>
	Average FAP	1,676	2,784	2,017	2,356	2,807	3,161	3,785	2,558
	<b>Current Retirees</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>5</b>	<b>6</b>	<b>9</b>	<b>6</b>	<b>2</b>
<b>2001</b>	<b>Average Benefit</b>	<b>262</b>	<b>550</b>	<b>757</b>	<b>1,189</b>	<b>1,897</b>	<b>2,466</b>	<b>2,793</b>	<b>2,581</b>
	Average FAP	1,475	721	1,936	1,617	2,713	3,158	3,343	3,176
	<b>Current Retirees</b>	<b>5</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>14</b>	<b>23</b>	<b>10</b>	<b>2</b>
<b>2002</b>	<b>Average Benefit</b>	<b>176</b>	<b>295</b>	<b>873</b>	<b>1,164</b>	<b>1,908</b>	<b>2,473</b>	<b>2,174</b>	<b>0</b>
	Average FAP	1,767	1,749	2,477	2,129	2,827	3,215	3,094	0
	<b>Current Retirees</b>	<b>2</b>	<b>5</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>0</b>
<b>2003</b>	<b>Average Benefit</b>	<b>339</b>	<b>385</b>	<b>591</b>	<b>1,181</b>	<b>1,988</b>	<b>2,043</b>	<b>2,586</b>	<b>1,956</b>
	Average FAP	1,917	1,769	2,638	2,490	2,495	2,729	3,611	3,001
	<b>Current Retirees</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>10</b>	<b>15</b>	<b>3</b>	<b>3</b>
<b>2004</b>	<b>Average Benefit</b>	<b>237</b>	<b>417</b>	<b>501</b>	<b>1,255</b>	<b>1,863</b>	<b>2,385</b>	<b>2,878</b>	<b>4,904</b>
	Average FAP	1,985	2,119	2,025	2,353	2,768	3,021	3,654	5,259
	<b>Current Retirees</b>	<b>3</b>	<b>5</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>1</b>
<b>2005</b>	<b>Average Benefit</b>	<b>223</b>	<b>343</b>	<b>597</b>	<b>931</b>	<b>2,422</b>	<b>3,284</b>	<b>1,611</b>	<b>2,912</b>
	Average FAP	1,298	1,227	2,240	1,589	3,285	4,044	2,317	4,422
	<b>Current Retirees</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>7</b>	<b>8</b>	<b>2</b>	<b>1</b>

## **MPERS**

### **By Years of Service**

Retired In Fiscal Year		0-10	11-15	16-20	21-25	26-30	31-35	36-40	41+
<b>2003</b>	<b>Average Benefit</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,498</b>	<b>0</b>	<b>0</b>	<b>0</b>
	Average FAP	0	0	0	0	3,232	0	0	0
	<b>Current Retirees</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>

FAP = Final Average Pay

# Retired Member Data (Ten-Year Averages)

## Retirement Age/Years of Service/Benefit Information

(The information contained in this tabulation relates to current retirees who retired in the years indicated.)

### MoDOT

Retired in Fiscal Year	Current Retirees	Average Age at Retirement	Average Service	Average Initial Benefit	Average Benefit on June 30, 2005	Percent of Increase
1996	175	59.01	32.27	\$ 1,441	\$ 2,112	46.54%
1997	178	58.49	30.66	1,351	1,941	43.72
1998	196	59.54	31.85	1,436	1,973	37.42
1999	175	58.65	31.27	1,511	2,079	37.58
2000	263	58.07	31.98	1,695	2,328	37.31
2001	430	56.80	32.41	2,017	2,143	6.25
2002	237	58.13	31.24	2,069	2,105	1.72
2003	193	57.51	30.34	1,827	1,943	6.37
2004	233	57.38	28.57	1,929	1,989	3.12
2005	160	57.94	27.60	1,720	1,755	2.03

### Uniformed Patrol

Retired in Fiscal Year	Current Retirees	Average Age at Retirement	Average Service	Average Initial Benefit	Average Benefit on June 30, 2005	Percent of Increase
1996	21	54.43	32.52	\$ 2,659	\$ 3,857	45.05%
1997	33	54.73	31.82	2,779	3,887	39.85
1998	29	53.93	31.10	2,916	3,948	35.40
1999	48	54.46	31.73	3,083	3,990	29.44
2000	28	54.71	33.07	3,203	3,993	24.67
2001	27	57.07	33.56	2,848	3,528	23.86
2002	35	52.97	32.46	3,256	3,903	19.88
2003	30	54.33	32.07	2,815	3,289	16.85
2004	27	54.93	31.70	2,675	3,189	19.24
2005	21	54.62	31.38	2,841	3,048	7.30

NOTE: Annual cost-of-living adjustments for the Closed Plan range between 4% and 5%.  
Annual cost-of-living adjustments for the Year 2000 Plan are 80% of the CPI-U.

# Retired Members Data (Ten-Year Averages)

## Retirement Age/Years of Service/Benefit Information

(The information contained in this tabulation relates to current retirees who retired in the years indicated.)

### Civilian Patrol

Retired in Fiscal Year	Current Retirees	Average Age at Retirement	Average Service	Average Initial Benefit	Average Benefit on June 30, 2005	Percent of Increase
1996	25	60.96	26.28	\$ 954	\$ 1,447	51.70%
1997	27	60.15	29.04	1,185	1,663	40.29
1998	25	59.44	28.12	1,261	1,760	39.49
1999	27	58.63	30.04	1,358	1,914	40.97
2000	34	58.82	28.94	1,374	1,850	34.63
2001	59	57.95	30.92	2,020	2,077	2.83
2002	30	57.73	26.97	1,487	1,504	1.14
2003	44	58.02	29.25	1,588	1,642	3.40
2004	40	58.35	27.25	1,747	1,790	2.45
2005	31	58.00	26.55	1,822	1,848	1.42

### MPERS

Retired in Fiscal Year	Current Retirees	Average Age at Retirement	Average Service	Average Initial Benefit	Average Benefit on June 30, 2005	Percent of Increase
1999	1	69.00	14.00	\$ 80	\$ 101	26.54%
2003	1	51.00	30.00	2,402	2,498	3.99

NOTE: Annual cost-of-living adjustments for the Closed Plan range between 4% and 5%.  
Annual cost-of-living adjustments for the Year 2000 Plan are 80% of the CPI-U.

## *Additions By Source*

<b>Fiscal Year</b>	<b>Employer Contributions</b>	<b>Other Contributions</b>	<b>Net Investment Income</b>	<b>Other Income</b>	<b>Total</b>
2000	\$ 70,191,993	\$ *	\$ 52,025,236	\$ 0	\$ 122,217,229
2001	81,155,196	197,823	(32,956,576)	0	48,396,443
2002	77,440,468	640,254	(88,252,400)	0	(10,171,678)
2003	76,806,313	2,584,257	36,526,003	0	115,916,573
2004	86,724,914	842,665	180,910,907	33,851	268,512,337
2005	102,240,145	364,680	144,641,068	31,104	247,276,997

\*Contributions were not separable. All amounts reported under Employer Contributions.

## *Deductions By Type*

<b>Fiscal Year</b>	<b>Benefit Payments</b>	<b>Administrative Expenses</b>	<b>Total</b>
2000	\$ 95,402,854	\$ 665,941	\$ 96,068,795
2001	111,985,064	835,215	112,820,279
2002	133,498,818	1,334,555	134,833,373
2003	144,334,345	1,451,855	145,786,200
2004	154,987,027	1,639,133	156,626,160
2005	157,742,337	1,916,592	159,658,929

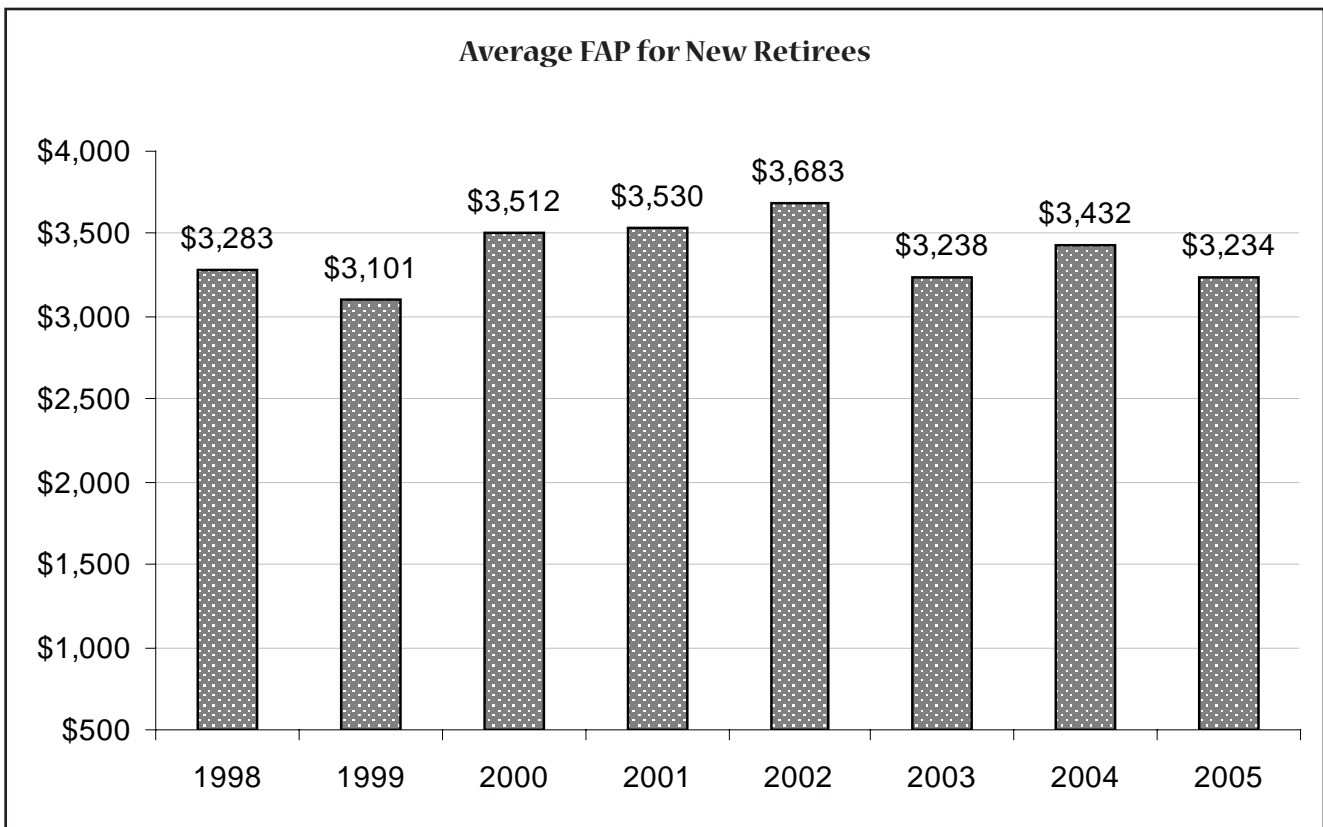
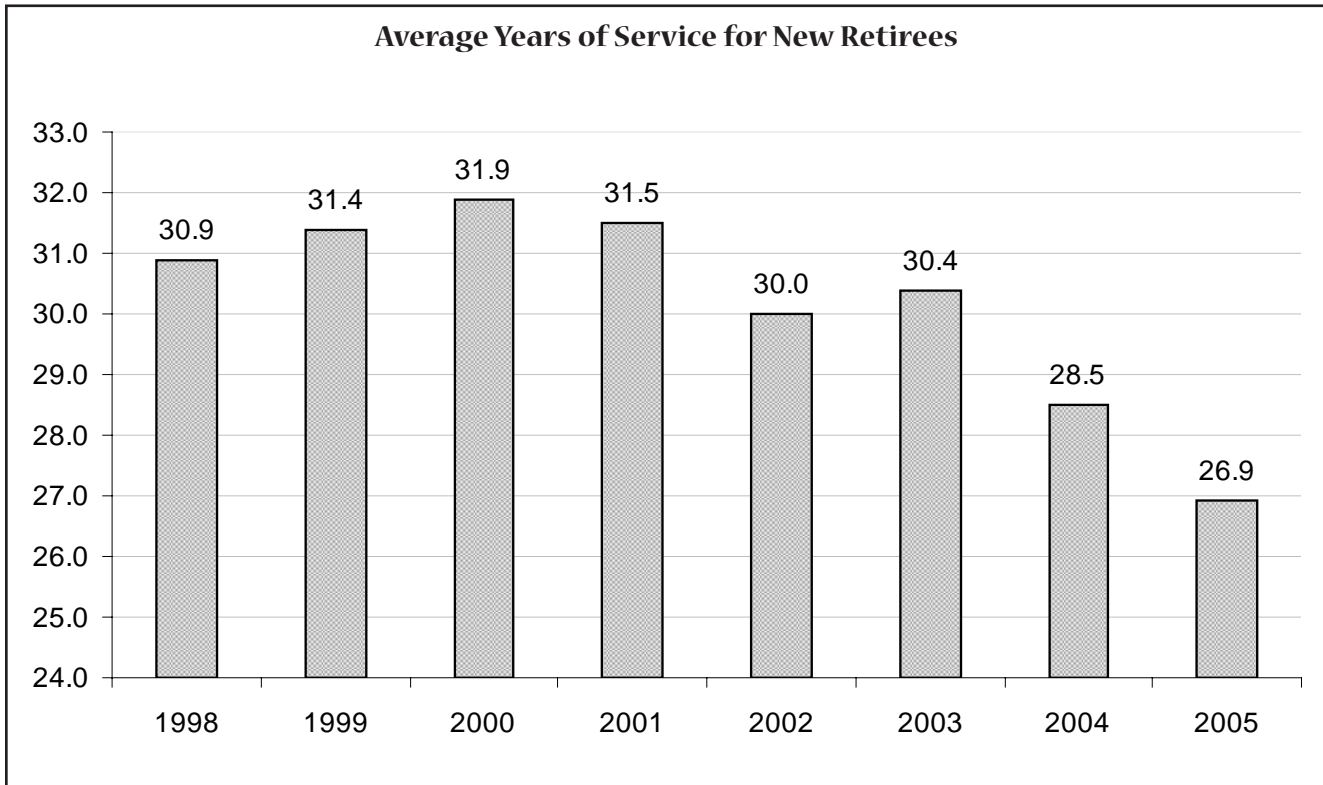
## *Benefit Payments By Type*

<b>Fiscal Year</b>	<b>Retirees &amp; Survivors</b>	<b>Disability<sup>1</sup></b>	<b>Insured Disability<sup>2</sup></b>	<b>Death</b>	<b>Total</b>
2000	\$ 94,593,110	\$ 519,745		\$ 290,000	\$ 95,402,854
2001	111,189,632	490,433		305,000	111,985,064
2002	132,558,139	515,679		425,000	133,498,818
2003	143,386,832	537,513		410,000	144,334,345
2004	153,085,937	1,491,089		410,000	154,987,027
2005	153,999,579	1,489,972	\$1,837,786	415,000	157,742,337

<sup>1</sup> Prior to FY04, work-related and normal disabilities were reported in Regular Benefits.

<sup>2</sup> Program began 7/1/04.

## *Average Years of Service and Final Average Pay for New Retirees*



# *Location of MPERS Retirees*

*For the Year Ended June 30, 2005*

This map represents the demographic distribution of retirees by state.





# *Notes*